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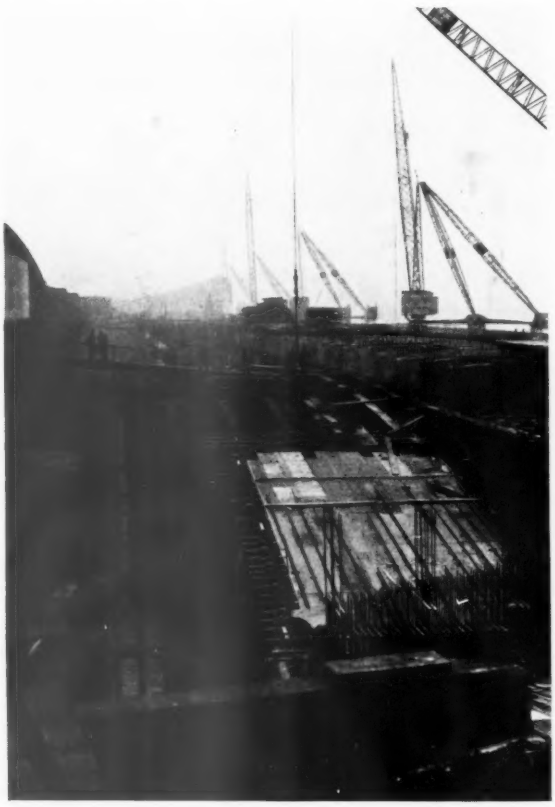
The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, NOVEMBER 9, 1939. NUMBER 2338 : VOLUME 90

PRINCIPAL CONTENTS

UNDER CONSTRUCTION: WATERLOO BRIDGE



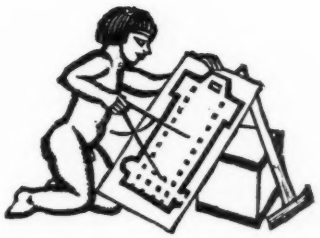
FOR two years work has been proceeding on the new Waterloo Bridge. Already the four piers and the abutments have been completed and it is possible to trace the arches and the roadway for a considerable distance from the south end of the bridge. Steel girders have been placed in position to carry the centering over the Victoria Embankment, and the span over the Embankment will soon begin to take shape. The war has naturally caused difficulty in obtaining steel and timber and has made its calls on the workmen, many of whom have been taken for national service. But supplies of steel are improving, new men have been taken on, and 450 are now working to bring the bridge into use as speedily as war conditions permit. The bridge is being constructed throughout in reinforced concrete, faced with Portland stone and granite. Granite from the old bridge has been re-cut to face the piers of the new bridge.

Top, left, view showing shuttering for arch vault slabs; top, right, No. 1 pier constructed of granite masonry taken from the old bridge. Above, concrete exposed; it is to be faced with Portland stone. Note gap in centre left to allow for settlement.

WATERLOO BRIDGE

The five spans of the new bridge will each be approximately 250 feet long. They will take the form of "twin arches" connected by beams and slabs, affording from the Victoria Embankment a vista under the length of the bridge. The superstructure is carried on narrow walls, 83 feet long and only 2 feet 3 inches thick, which rest on massive foundations far below the river-bed level. These, together with the surrounding shell of reinforced concrete, form the piers, 14 feet wide and 106 feet in length. Engineers are Messrs. Rendel, Palmer and Tritton, and the design of the bridge was prepared by them in association with the L.C.C.'s Chief Engineer (Mr. T. Peirson Frank) in collaboration with Sir Giles Gilbert Scott. Contractors are Peter Lind & Co.

Above are two views of the bridge under construction.



DAMAGE TO BUILDINGS

AT the outbreak of war one of the most serious problems affecting property owners and tenants was that of compensation and procedure in connection with buildings damaged by, or during, air raids.

After nine weeks anxiety has considerably diminished. Bombers in small numbers seem more likely to damage fields by falling themselves than to damage cities by their cargoes. And it seems probable—one cannot say more—that successive raids in large numbers will neither arrive for some time nor cause the universal havoc which tortured many imaginations two years ago.

These facts are reassuring and everyone likes to be reassured. But it is still a fact that German bombers have the power to damage very considerably half a dozen large cities—or a dozen ports. The sensible procedure for property owners is to make preparations for being unlucky themselves—and then forget about it.

The general position is that air-raid damage will be paid for by the Exchequer after the war in such measure as the country's finances can stand. Every owner and tenant in a dangerous area should therefore have full drawings prepared of his premises and an inventory of its contents.

The repair of war damage to housing is to be supervised and carried out by the housing authority, who will be responsible, not only for working-class houses, but for any building being used or required to be used for the accommodation of the general population. First-aid repairs, such as placing a tarpaulin over a hole in the roof or temporarily boarding up a hole in the wall will be effected immediately, but, in the case of more permanent repairs, the local authority must give fourteen days' notice of its intention to carry out the work and an estimate of the cost to the person in control of the house. These more permanent repairs would make the house reasonably fit for human habitation and would include such things as reinstating tiling, brickwork and windows, but not internal decoration. Before serving the fourteen days' notice the local authority must obtain the consent of the appropriate Minister. The cost defrayed by loans from the appropriate Minister, would be registered as a charge upon the premises, but no demand for repayment would be made until after the war. The repair of war damage to essential buildings and plant is the responsibility of the housing authorities and the county councils. Some of these buildings will be either owned or occupied by local authorities, such as hospitals, first-aid posts or schools; some will be similar buildings in private ownership; while others will be buildings not directly connected with the normal activities of the local authority, such as bakeries. For buildings owned or occupied by local authorities, the appropriate Minister may direct repairs to be carried out, lending the necessary money. For similar buildings privately-owned the housing authority may be required either to lend the money or do the repairs. In the case of buildings coming under the third category, such as bakeries, the housing authority or the appropriate Minister, may lend the money. As in the case of housing, no demand for the repayment of the cost of repairs to buildings in private ownership will be made until after the war.

Apart from such financial assistance as may be provided towards the repair of houses and essential buildings no payments will be made in respect of loss or of damage to property arising from enemy action until the end of hostilities. It is, however, essential that all damage should be reported as soon as possible after it has occurred. For this purpose arrangements have been made for the receipt of claims and recording of damage by the Valuation Office of the Inland Revenue. Forms of claim, to be lodged by the claimant within thirty days, will be available shortly at municipal offices or at the office of the local District Valuer, Inland Revenue.

The position in regard to quick repairs to buildings neither "essential" nor residential appears rather obscure and presumably will depend on the intensity of bombing in the area. Businesses which can be moved from damaged premises will presumably be expected to do so, while shops, printing works and other businesses, which cannot be moved without great loss, may expect preference, after essential buildings, in labour and materials.

The wise procedure at the moment is, we repeat, for all owners to prepare full records of their premises during this time of quiet.

The Architects' Journal
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NOTES & TOPICS

NOT FORGOTTEN

THE Lion has Wings—our first attempt to use the films to show why we are at war, and what arrangements we have made to meet rough stuff with rough stuff—has now been showing for two weeks. It is directed by Alexander Korda, and ought to be seen, professionally and otherwise.

*

Otherwise, first of all, because the film shows quite plainly that when a case of first-rate importance is being stated, ordinary studio slickness won't do. It was the extracts from the G.P.O. Film Unit's work and "straight" shots from news-reels and in factories which rang the bell.

*

Propaganda must appeal to the Average Man. No doubt this explained the occasional over-handsome pilot in his boxed-up seat and the occasional Merle Oberon registering distress in faultless dresses against a faultless room. But these short intervals were not the high-lights—even to the shilling seats as far as one could tell.

*

The film began by showing some of the things Britain was doing three years ago instead of making guns. Here the architect came into his own. The audience hovered for two long minutes over Kensal House ; and then toured L.C.C. flats and Welwyn Garden City, new schools, swimming baths and assembly halls. It was pleasant to see our work rated well up in the assets of the country at really awkward moments.

SIR CHARLES TAKES A LEAD

That audience was told quite a lot it ought to know before it escaped. The "short" of the programme was *The City*, a G.P.O. Film Unit work dealing with the Bressey Report.

*

We were shown the growth of London, the mess and what Londoners suffer from it. And then Sir Charles Bressey (with the air of the nicest possible kind of lion being gentle with the children) explained the Bressey Report with the extraordinary clearness which films make possible—with a flashback to Wren's plans.

*

When we have time to think of such things again *The City* ought to help in getting them at least *started*.

DISCIPLINARY ACTION

The last ten days have discovered a very odd situation in connection with the Architects' Registration Council.

*

The purpose of this body, we all believed, was to ensure, in time, that everyone calling himself an architect would (1) be reasonably well-qualified, and (2) adhere to the standards of professional conduct laid down by the Council.

*

Last week the Council made its first pronouncement of disciplinary action against a City architect, who was suspended from the Register for five years for sending out a

The Reception Room at the R.I.B.A., which has been converted into a temporary Library. Daily and weekly papers are available as well as architectural publications.

The Cathedral at Poserja, Chile. Built by Chinese converted to Catholicism.

monthly circular of an advertising character. The Council circulated its decision to the Press in the same form as that used by the General Medical Council and the Law Society. But the press, including *The Times*, has shown itself unwilling to publish the name of the architect concerned.

*

This situation is ludicrous. One hopes that these cases will be few, that a stern private warning will be used whenever possible with first offenders. But when the Council has decided that public action is necessary, failure to secure general publication of the name of the offender will nullify almost the whole effect of its decision.

*

If a special ruling cannot be obtained, the sooner the Council and an interested newspaper fight a test action (if the offender brings one), the better for the whole profession.

THE PART IS NOT THE WHOLE

The informal general meeting held at the R.I.B.A. on October 23 was naturally felt to be very important. The war has put all of us in a situation of great, often desperate, difficulty. It has also ended a lot of the R.I.B.A.'s normal activities. So that a meeting at which architects could discuss the emergency, and perhaps hear something of the policy of the R.I.B.A. in regard to it, was a special occasion.

*

The meeting was at 4 p.m.—and there, in the opinion of many of London's younger architects, was the plain sign of the Dark Forces. The senior men obviously trying to carry their own sinister motions by tremendous majorities whilst the young men were safely barred up in offices for another two hours.

*

I do not willingly yield to anyone in my capacity for suspecting corruption in high places, but this, in my view, is going too far.

*

First, many young London architects were, unfortunately, only too able to attend a meeting at any time. Second, a substantial proportion of the rest could have got off on that day if they had asked. Three, *nota bene*, the R.I.B.A. is a British and not a London organization. Newcastle men no doubt could not attend, but many architects in the Home Counties could, if the meeting ended early enough to suit disorganized suburban train services.

*

With regret, I believe it was these reasons, and notably the last, which fixed the time of the meeting.

TROPIC CRITIC

In more puzzling than stirring days, a letter from an architect in Santiago de Chile—in a cottage " where small farms on the lower Andes slopes meet the fringes of a Santiago suburb "—has specially tonic properties. I was not sure where Santiago de Chile is ; but it was not of much consequence as my correspondent has just finished two years in Ecuador.

*

First thing I thought of (he writes) on hearing of Hitler's invasion of Poland was the nice Polish girl at the London School of Interior Decoration. This was a typically tropical reaction . . .

*

There is a lot of architecture in Santiago, sharp geometric twelve- and fifteen-storey R.C. buildings well placed and designed. The new villas in the suburbs are either Hollywood Spanish colonial or *moderne*, with an occasional effusion by a young man who knows all about the latest things in staircases and balconies, such as Corbusier and Tecton invent . . .

*

At Trujillo, a beautiful old colonial town in a fine state of preservation, is an incomparable church, El Carmen, which has an altar of beaten gold and silver to excite the greed of tourists, but it balances market with more real value. The nave walls are plain white stucco with good paintings on stone and wood ; then the narrow cylindrical pulpit is another gold feast ; and beyond this, flanking the altar, is a huge screen of hardwood with six-inch steel spikes behind which the nunnery novices hear Mass. Apart from the possible enthusiasm of the male element in the population, only a strong sense of drama can explain this. It really looked terrific . . .

*

Back numbers of THE ARCHITECTS' JOURNAL which have been chasing me around have just arrived, and I am very sad at the thought of having missed Frank Lloyd Wright. I believe that when all the conflict has blown over and some new ideas arrive (if they must) we shall see that his work and personality is still important, it is so rich ; whereas Corbusier and so many others will appear as fantastic offshoots of the nineteenth-century utilitarian movement.

*

I hope I would be as strong-minded after two years in Santiago de Chile—or even Ecuador. Above is one of the photographs included in the letter. My correspondent's name is Edward Wright.

LITTER

Country districts are now beginning to acquire the rich and varied untidiness which distinguish public open spaces like Hampstead Heath after a Bank Holiday. This is one of the first fruits of the social revolution which has transported so many town dwellers to the country.

*

The paper trade might well run some competitions for encouraging school children to retrieve the litter which they cast about the countryside, so that it can be used for paper making. Meanwhile, paper rustles everywhere, contributing confusion to our black-out, and distress to daylight excursions.

ASTRAGAL

This week we include a new section in the INFORMATION CENTRE; this section deals with research. Hitherto, the CENTRE has included questions and answers, architectural and building news and notes on A.R.P. equipment. On page 572 will be found the first of a series of articles on shelters which has been contributed by Mr. Felix J. Samuely, the civil engineer, who (in collaboration with Mr. Conrad W. Hamann) was responsible for the two special issues of the JOURNAL *on Civil Defence (published last July) and "Civil Protection,"* which, although recently published, has already become a textbook on the subject. This new series will be followed by others dealing with technical research connected with war emergency.*

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THE A.J. INFORMATION CENTRE
FLAXMAN 5322

The Information Centre itself is working from London, but enquiries sent direct to the JOURNAL *will be passed on without delay.*

These are typical of the questions we have already answered :

How are ventilated black-out window screens formed ?

How is sandbagging rotproofed ?

How much safer is a 20-ft. deep shelter than a semi-surface type ?

How is a light lock formed ?

How should screen walls be arranged ?

How is a basement shelter protected from bursting water mains ?

What is the definition of a light-proof material ?

What publications are there on farm buildings ?

What would be the maximum spread of debris if an h.e. bomb hit a 330-ft. stack ?

What publications are there on camouflage ?

What protection is needed for light shafts ?

What is adequate provision for a first aid and decontamination centre ?

Is a 1938 contract binding ?

Who is responsible for making good air-raid damage to unfixed materials ?

What is the cost per head of gas filtration ?

Under what obligation is a building owner to provide shelter for the occupants ?

How is a leaking shelter waterproofed ?

How will the grant be paid ?

Are cinemas to be provided with shelters ?

Can blast-proof doors be used for naturally ventilated shelters ?

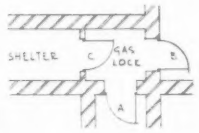
Q80 GODALMING.—*We should be much obliged if you could tell us as near as it is possible to say the PERCENTAGE INCREASE in the cost of house building since the commencement of war. We appreciate that it is difficult to give a very close estimate, but at the same time we would like this to check up our own ideas, particularly as you must be in a better position to judge this increase than we are ourselves.*

It is not possible to give a very accurate percentage increase in the cost of domestic building since the commencement of war, because the prices of materials vary from day to day ; also the distance of the builder and his workmen from the job is a more serious matter now because of transport difficulties. There are also delays caused by the difficulty of getting materials subject to Government control, and articles in great demand for A.R.P. work. From the information we possess, it appears that the cost of materials has increased by 10 to 15 per cent. for domestic work, and by even more for commercial work. There is no official increase in the cost of bricks, and no great increase in the cost of cement, but equipment has increased by 5 per cent. to 10 per cent., sanitary fittings by 10 per cent., sand and ballast by as much as 50 per cent. There is no general increase in the price of glass. Transport is the most uncertain factor, as apart from the fact that many firms have had a number of lorries requisitioned, they are unable to obtain sufficient petrol to run the remaining ones full time. A contractor will certainly cover himself against price fluctuations, delivery delays and possible shortage of labour, and he may even be unwilling to sign a contract for a job of any size. There is no official increase in wages, and they appear to have remained the same, but depending upon the number of Government contracts in your locality there may be a labour shortage which will increase the contractor's difficulties and consequently his charges.

Q81 WOLVERHAMPTON.—*A client wishes to convert a basement corridor in a large commercial building to form a gas-proof air raid shelter, ventilated by means of a filter ventilation unit. It is proposed to seal the entrance of the shelter by means of a GAS-LOCK; but as this is to be formed at one end of the shelter, where there are two entrances to the corridor, it will be necessary to have two entrances to the gas-lock and one entrance to the shelter itself. I shall be obliged if you will suggest what type of gas seal would best and most economically form the necessary gas-lock in the position described. The building is a commercial building, under the terms of the Act, in which approximately 60 people are employed.*

An air-lock should strictly have only one entrance and one exit, because, if two entrances are opened at the same time, a draught may be

induced, and this would immediately destroy the effect of the air lock. The best arrangement would be to have one of the entrances (A or B, Fig. 1) blocked up by brickwork. If



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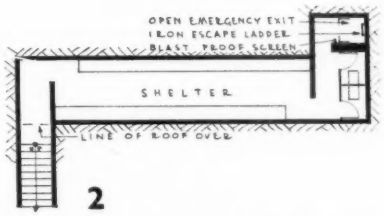
this cannot be done, it should be arranged that one entrance is kept closed during an air attack. Both doors should, of course, be gas-proofed. Door C can be either gas-proof or replaced by a gas curtain. The latter is, however, dependent on no wind or draught reaching it, and should be used only where it cannot be so disturbed. A gas curtain is not recommended for both entrance and exit of the air lock.

Q82 WITHAM.—*I shall be obliged if you will let me have some detailed calculations for arriving at the minimum amount of VENTILATION necessary at the emergency outlet of a trench shelter 30 ft. long and 7 ft. wide by 7 ft. high inside, formed with 6-in. concrete floor, walls and roof, covered with 2 ft. 6 in. of earth. The shelter is partly underground and a door opening is formed at the entrance, with an emergency steel cover at the far end. The intention is for the shelter to accommodate fifty persons, and the problem is to determine the minimum amount of opening required at the emergency exit to give continuous ventilation. The top of the emergency exit is approximately 2 ft. above the roof of the shelter, and I should be interested to know the bases of calculation which meet the existing regulations.*

Paragraph 6 of the Code, subsection 1, allows trench shelters with openings at both ends to have a floor area of $3\frac{3}{4}$ sq. ft. per person. This minimum is based on empirical knowledge, which shows that the rate of condensation in a shelter, which is totally surrounded by earth and in no way heat insulated, is sufficient to give the occupants a reasonable amount of comfort where there is an area of $3\frac{3}{4}$ sq. ft. per person, provided a constant stream of fresh air is available. There are doubtless not sufficient tests in existence to allow calculations to be based upon them, but it is probably meant that full openings of the size of the minimum door should be provided at either end of the trench. An emergency exit at high level will generally be more effective than an ordinary door opening, because a difference in levels between the entrance and exit will induce a constant flow of air in one direction. Owing to the air flow being in the one direction the w.c.s should be arranged near the emergency exit. It might therefore be suggested that an opening 3 ft. by 3 ft. in the roof will be sufficient, but such an opening is of value only if it can be kept open during raids, or, in other words, that it is so situated that splinters falling through it would not endanger the occupants (Fig. 2). The entrance should of course be protected by a screen wall. By keeping the floor area as low as $3\frac{3}{4}$ sq. ft. per person, considerable expense may be involved if gas proofing is required at a later date, for the Code states clearly that in a shelter allowing only $3\frac{3}{4}$ sq. ft. per person, once connections with the



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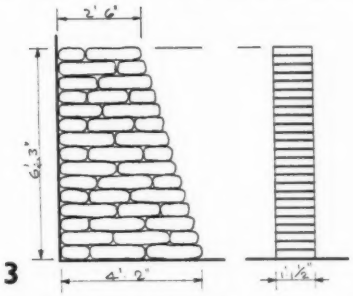
outer air are closed, and ventilation is provided by artificial means only, this must be sufficient to give 450 cu. ft. of air per person per hour. If, however, the shelter is built in accordance with paragraph 6, subsection 2, of the Code, and allows per person

Not less than 6 sq. ft. of floor area ;
Not less than 50 cu. ft. capacity ;
Not less than 25 sq. ft. of surface area of all walls backed by earth, other walls not less than $8\frac{1}{2}$ in. thick, floor and ceiling or roof ;

then the system of ventilation need allow only 150 cu. ft. of air per person per hour.

Q83 HOLBORN.—*What minimum THICKNESS OF SANDBAGGING is considered splinter and blast proof? How does the cost of sandbagging compare with 14-in. brickwork?*

2 ft. 6 in., but it should be remembered this is the minimum, i.e. the thickness at the top of the wall, which should have a batter of 1 in 4 for



3

stability, so that a 6-ft. high screen wall of sandbags will be 4 ft. thick at its base (Fig. 3). Sandbags cost approximately 1s. 3d. each filled and erected. There are about 37 to the cub. yard, which therefore costs £2. 6s.

14-in. Fletton brickwork in cement mortar costs approximately £3 a cub. yard built in small quantities. Since it takes three times the volume of sandbagging to give the same protection as brickwork (*see* diagram), it may be said that the former is at least twice as expensive.

Q84 MARGATE.—*From recent quotations I find that ventilating plants cost over £100 for 100 persons and gas filtration at least another £100. Is GAS FILTRATION necessary when the air intake shaft is carried up at least 30 ft. above the ground level? A cost of over £2 per head plus electricians' and builders' work appears to me to be high, although on page 470 of the* JOURNAL *for October 12 it is stated "technicians should persuade their clients to spend the little sums required for installation of ventilation, even though the regulations do not expressly require it."*

£200 for ventilation and gas filtration for 100 persons appears an excessive price. It should be around £130. Gas filtration is definitely not demanded at present. Even if at a later date the danger of gas has to be considered, it may not be necessary to have a gas filtration plant provided the walls to the air intake shaft are properly sealed so that no air can enter through them, and if the opening at the top is covered so that no liquid gases can get in. What gas attacks will be like, if there are any, is not really known, as no gas attacks on towns have yet taken place. While it seems unlikely that an enemy will be able to drop so much gas that it will still have a dangerous concentration at 30 ft., no guarantee can be given. The altitude of the building in relation to surrounding land has a bearing on this part of your question. A 30-ft. shaft might be damaged in a raid, but the occupants of the shelter could still draw in air if they had filtration plant with an alternative intake. The reference to *little sums* clearly did not refer to the question of gas filtration. It referred to the provision of ventilation *only*, the cost of which is less than half the total and would not be wasted if gas filtration were required later.

REFERENCE BACK

[*This section deals with previous questions and answers.*]

Q76

In the answer to this question in the JOURNAL for November 2, it was

implied that a permit is necessary for lead sheet and pipe, etc. This is not in fact the case. Pig lead is controlled, and manufacturers must get a permit for this, but there is no control of manufactured lead goods.

This is the first of a series of wartime articles which will deal with the problems that most closely concern architects at the time of publication.

RESEARCH

SHELTERS

[BY FELIX J. SAMUELY]

THIS series of articles is intended to give advice on the problems the technician will meet when designing and supervising the execution of air raid shelters.

For some of the required work, regulations exist, e.g. the "Air Raid Shelter Code," but it would be a great mistake to assume that the standard provided by this Code represent all that will have to be done; therefore, the personal judgment of an advisor, while already necessary where regulations exist, becomes absolutely essential for work not controlled by officially accepted rules. Civil protection does not mean the provision of shelters only. The protection of property, obscuring of lights and camouflage will require technical advice. The following notes are based on the assumption that blast- and splinter-proof shelters, visualized by the Government, will have to be provided for the whole of the urban population, and that when the scheme is completed, a more elaborate programme may be started, comprising "bomb-resisting shelters" for a certain proportion of the public. It is also assumed that the importance of protecting property as well as persons will soon be realized more fully, particularly against incendiary bombs, and that such protection will be undertaken on a large scale probably before a start is made on the provision of "bomb-resisting shelters."

The following list suggests the probable scope of architectural advice in the near future :

I. Shelters : (1) Public shelters. (2) Shelters for employees. (3) Private shelters.

II. Protection of property : (1) Important industries. (2) Services, drainage, etc. (3) Private houses.

III. Miscellaneous : (1) Obscuring of lights. (2) Camouflage.

IV. Demolition and re-erection of damaged buildings.

V. Bomb-resisting shelters and buildings.

This series will not cover all the points enumerated. Group III is, at present, least important, as most lights have already been obscured, and the authorities concerned will no doubt themselves give advice in every case requiring camouflage, so that the assistance of a professional advisor will rarely be required. Group IV will be of enormous importance if air raids begin on a large scale, but it is still a relatively distant consideration and not scheduled, at present, for inclusion in this series.

(1) *Public Shelters*

ALTHOUGH, in general, the planning of a public shelter is more important than its constructional details, an intimate knowledge of the details will affect the decision on the proper type of shelter and its correct placing.

Although public shelters are not subject to the requirements of the Code, they should not be of a lower standard. If the standard can be slightly higher than Code requirements, so much the better. Certain points, important in public shelters though not officially regarded as essential in shelters for employees, should be considered. For instance, all public shelters should be gas-proofed, properly ventilated, and decontamination and first-aid centres should be provided. Emergency exits should always lead to a space which cannot be endangered by falling debris, and no compromise should be considered where the number of people allowed in each compartment, or the dimensions of division walls separating compartments, are concerned (*see* page 573).

Public shelters can be arranged in squares or streets or other open ground where there is no danger of falling debris, either above or below ground (*see* page 573). Or they may be in basements, where debris loads must be considered, as established by the Code (Table I). Or they may be in the immediate neighbourhood of buildings where extraordinarily heavy debris loads can be expected.

Fig. 1 gives an idea of the variation in the amount of debris load which might have to be carried in different places. There should be no need to point out that provision against debris load always means extra expense, and that, therefore, from a point of view of economy, a site where little or no debris can be expected is to be preferred.

The lateral protection against blast and splinters is defined by Table II. It is evident that the materials mentioned have widely different costs. For instance, 2 ft. 6 in. of earth may be available and may cost nothing, or even if it has to be filled in may still cost less than any of the other materials. Steel plates, 1½ in. thick, are the most expensive protection. Therefore, where possible, earth should be used for lateral protection. Failing this, brick or concrete walls should be used. Steel is suitable only for the closing of openings where material of lighter weight is required.

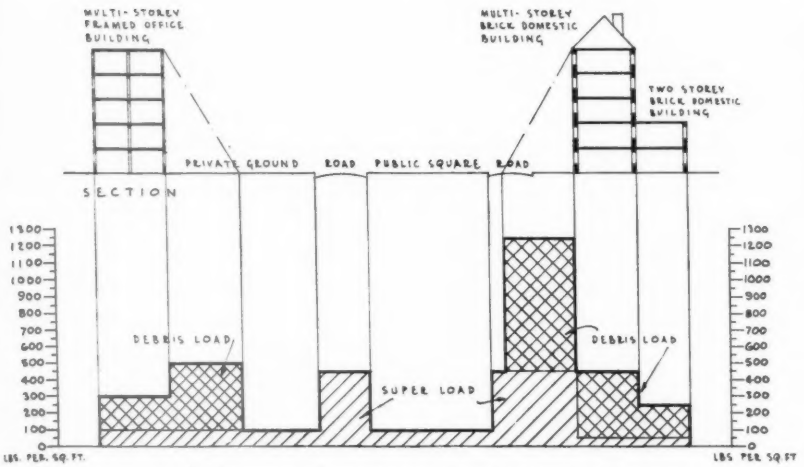
TABLE I

Number of storeys at a higher level than the top of the shelter	Minimum static load (in addition to the floor load) to be assumed to represent the effect of the debris, lb. per sq. ft. of floor area
1 or 2	200
3 or 4	300
Over 4	400

These loads refer to the inside of buildings only, which have to sustain no extraordinary load. They are additional to dead and normal live load.

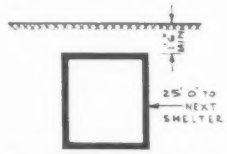
Where a shelter is protected laterally by earth (Fig. 2) a wall must be constructed to retain this earth, *but such a retaining wall is not bound to conform to the requirements for lateral protection.*

Other materials, therefore, than those



1 *Diagram of superimposed and debris loads.*

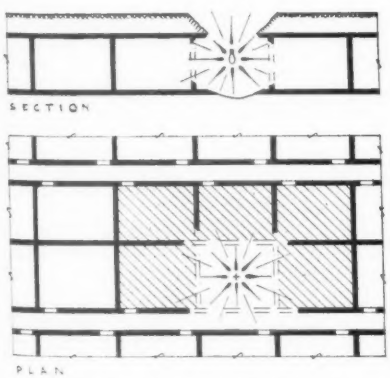
mentioned above can be used economically for such walls, and corrugated or dovetailed steel, protected on the



2 *Earth protection for trench.*

outside by 1 in. of concrete, precast reinforced concrete units, or cast *in situ* concrete, will be suitable.

According to the Code, division walls between compartments must have a prescribed thickness. This will be the same as for outer walls (*see* Table II), if not more than 50 people are in one compartment, or 24 in. of reinforced concrete if there are more than 50 (up to 200). It is emphasized, however, that only in special cases should compartments be constructed to accommodate more than 50 people. It is



3 *Effect of explosion on neighbouring compartments.*

generally acknowledged that, in this respect, the standard of protection should be higher in public shelters than in those which come under the Code.

It should be a definite rule for public shelters that only 50 *people should be allowed in each compartment*, and even then strong division walls should be arranged.

The function of a division wall is to localize the effect of a bomb. The provision of 13½ in. walls would still allow the neighbouring compartments to be affected (Fig. 3). If there is a number of such compartments, it is reasonable to increase the standard of protection. In many cases, where shelters are arranged in basements, space will be a governing factor, but even then 18 in. walls should be considered minimum. Special care should be taken to investigate the efficiency of the foundations of division walls (this will be fully discussed in a future article). Where space is available, particularly where

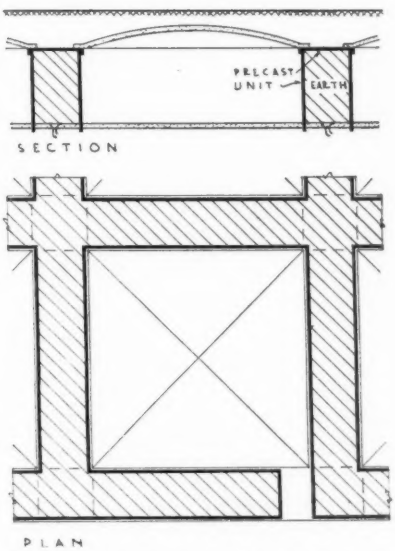
TABLE II

Material	Minimum thickness
Mild steel plate or plates ..	1½ in.
Reinforced concrete	12 in.
Sound brickwork or stonework	13½ in.
Ordinary unreinforced structural concrete	15 in.
Ballast or broken stone ..	24 in.
Earth or sand	30 in.

A corresponding aggregate thickness of a proportionate combination of such materials.

shelters are under public squares, it will always be more effective to use soil to form the division walls. This is done automatically in trench shelters, where, in accordance with regulations, trenches are not less than 25 ft. apart, or, in other words, there is a division wall of soil, 25 ft. thick between compartments. In many cases, it is impossible to allow as much as 25 ft., but even where only 4 ft. of soil is retained, if this is held by 6 in. cast *in situ* reinforced concrete walls, or by precast units of even smaller section, the protection afforded will equal that of brick walls 27 in. to 31½ in. thick (Fig. 4), and will generally be much cheaper, competing in price with brick and concrete of the thicknesses given in Table II, whilst being more efficient.

Thicknesses of materials required by the Code for overhead protection are shown in Table III. The requirements for the standard of overhead protection, which is independent of that required to withstand debris load, are lower than those for lateral protection. Again, the most economical protection is earth, and the most expensive, steel. From a practical point of view, distinction must be made between shelters in the open and those in basements. Shelters in the open can generally have an inexpensive overhead protection of soil, and in this case the slab need not be stronger than is necessary to carry the covering earth and the anticipated superimposed load. The superload itself should never be taken as less than 100 lb. per sq. ft., and as much more in special instances where, for example, shelters are under thoroughfares. (*See also* Fig. 1.) Such overhead slabs can often be constructed in the form of vaults or domes, so reducing the thickness to a minimum (Fig. 4.).



4 *Shelter walls, using soil or gravel as protection.*

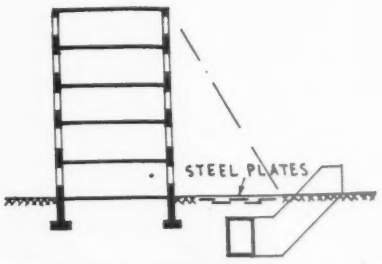
In most cases to increase the amount of earth cover on a shelter costs very little whilst adding greatly to safety. Four to six feet of earth might give security against the direct hit of a small instantaneously acting bomb. It has sometimes been said that more than 4 ft. of earth may increase the effect of a heavy bomb by producing a tamped explosion. This is incorrect; no tamped explosion is possible with an instantaneously acting bomb, and 4 ft. of earth can make very

little difference to the penetration of a delayed action bomb.

It is a good practice to provide a hard surface of small paving stones over shelters to ensure the instantaneous action of a bomb, which might penetrate a soft surface before exploding. When shelters or parts of shelters must be in the immediate neighbourhood of buildings, and so be vulnerable to damage by external debris (Fig. 5), there should never be less than 4 ft. of earth over the shelter, and even then at least twice the debris load which would occur inside the building should be assumed. (Fig. 1.)

The arrangement of steel plates near the surface of the soil will result in a large percentage of the kinetic energy of falling debris being used to further destroy the debris itself, and thus not affect the construction below.

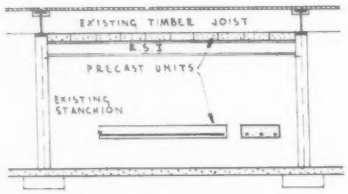
Where a shelter is inside a building it is important to discover whether the slab immediately over the shelter can be considered as overhead protection. Where it cannot be so regarded, the provision of this protection presents difficulties, which increase if the construction of the building is primitive. Timber flooring, for instance, and the



5 *External area, particularly endangered by the fall of debris.*

usual hollow tile floors cannot be considered as efficient overhead protection. Hollow tile floors will be regarded as sufficient only if there is either 3 in. of concrete on top of the hollow tiles, or 2½ in. of concrete plus at least 1 in. of screed, and such a thickness is rare. Another condition is that the width of the ribs between the tiles should be at least one quarter the width of the tiles. (Fig. 6.)

In buildings which do not in themselves provide the overhead protection, it is not sufficient merely to arrange new beams and so shorten existing spans in order to make the existing construction withstand the debris load. Something must also be done to ensure an uninterrupted overhead protection. Steel sheeting of the usual 10 to 16 gauge is not adequate, as ¼ in. is required. (*See* Table III.) Quarter-inch thick plates can be arranged either flat or pressed into a certain shape (merely corrugated steel is statically inadequate) but they are expensive. Timber, 4 in. thick, is sometimes used for private buildings, but it is not recommended for public shelters. The only other possibility is to use 4 in. precast reinforced concrete slabs, which again are rather unsatisfactory, owing to the heavy weight of the units. (Fig. 7.)



7 *Use of precast units.*

It is very rarely possible to provide new cast *in situ* ceilings. There are the following exceptions:

(*a*) Where the existing ceiling can be removed temporarily, a new slab may be cast from above. This must be of required thickness (Table III) and

TABLE III

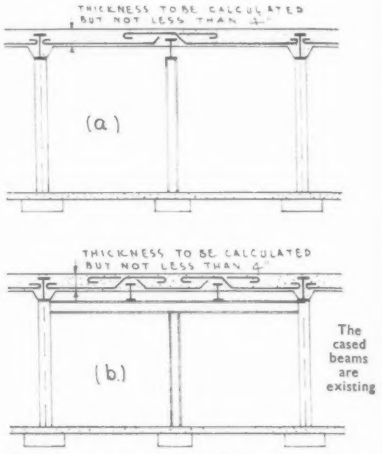
Material	Minimum thickness
Mild steel plate	¼ in.
Structural concrete reinforced	4 in.
Ordinary concrete reinforced	6 in.
Hollow tile floors	*See* Fig. 6 A & B
Sound brickwork or stonework arched	8½ in.
Ballast, broken stone or earth	18 in.

A corresponding aggregate thickness of a proportionate combination of such materials.

A substantial building consisting of a roof and two floors overhead.

calculated to withstand debris load, according to Table I (Fig. 8).

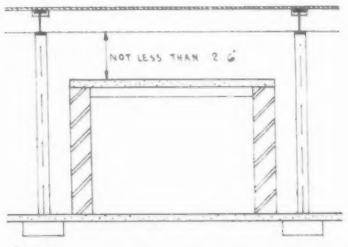
(*b*) Where there is sufficient headroom to allow a new slab to be cast under the existing one, the old ceiling may be left undisturbed, and the new slab cast (Fig. 9). This can be done only if there is a minimum space of 2 ft. 6 in. between



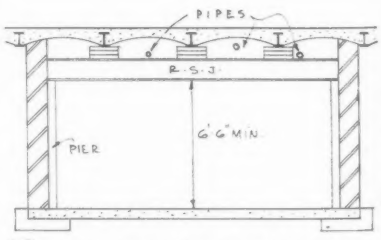
8 *New r.c. slab and its strutting.*

the soffit of the existing and the top of the new ceiling.

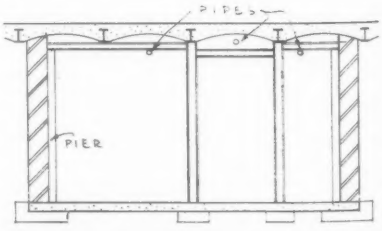
(*c*) Where the slab immediately over the shelter can be regarded as sufficient overhead protection, the problem is reduced to one of strutting (*see* below).



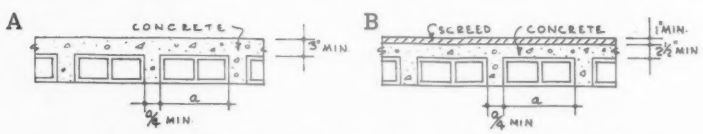
9 *New r.c. slab cast overhead without taking up existing ceiling.*



10 *Long joist placed under existing pipes.*



11 *Struts used to increase headroom.*



6 *Hollow tile floors in accordance with requirements for overhead protection.*

From this it is apparent that for public shelters, buildings with neither substantial concrete floors nor especially high basements should be avoided.

Where shelters are in the basements of existing buildings, it is necessary to introduce strutting. This consists of beams and columns, these latter often being replaced by piers or walls. To facilitate movement and communication, the normal number of struts may be reduced if the beams are made correspondingly heavier. Although this is more expensive, it is often preferable to short beams and close strutting. On the other hand, the layout of beams is not only a matter of economy, but of headroom, arrangement of service pipes, etc. Figs. 10 and 11 show comparative constructions with wide and closely spaced struts.

Stretchers may have to be taken to any part of the shelter, and allowance should be made for this traffic in placing the struts. For this reason first-aid centres, more than any other part of a shelter, should be kept clear of obstruction.

Taking all these points into consideration, public shelters in basements will, in principle, differ little from office and factory shelters in basements, and general details will be described in another instalment under the heading " Shelters for Employees " (I (2)).

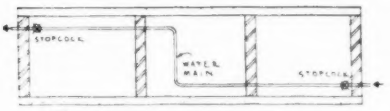
Some details, however, are more important in public than private shelters. There are :

(a) *Avoidance of services which pass the shelter.*

Almost all basements contain service pipes, and it is generally impossible to place a basement shelter where pipes are avoided altogether. A distinction may be made between pipes for different purposes, in order to keep away from those which might be really dangerous. Some pipes may cause inconvenience only if a shelter suffers a direct hit, and may be neglected since direct hits are not considered in other respects. Other pipes might break at joints owing to the collapse of the building, even if the shelter remained intact, and if these risks are created they must be avoided. In this respect gas pipes are particularly dangerous, and there is little difference between those running through a shelter and those in an adjoining room connected to the shelter by an opening, or which must be crossed in order to reach an exit. Gas masks give no protection against coal gas.

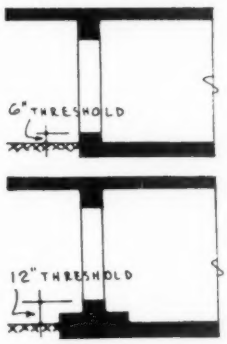
Where a shelter is properly ventilated and takes in air from outside (this does not depend on the existence of an air filtration plant), the existence of gas pipes in an adjoining room completely shut off from the shelter can be tolerated.

Danger in the case of water pipes depends much on the water pressure. In nearly all cases it is possible to provide easily accessible stop-cocks where the pipes enter and leave a shelter (Fig. 12). If a pipe connection breaks and the cock is closed, only a limited amount of water can escape, and need not be an inconvenience if the



12 *Stopvalves in water circuit.*

basement is drained. If such a pipe breaks outside the shelter it will flood the immediate neighbourhood temporarily, but the provision of thresholds (Fig. 13) at the entrances will prevent the water flowing into the shelter. In a similar way thresholds at openings in division walls will confine water to one



13 *Thresholds.*

compartment. Water pipes can be tolerated in public shelters, therefore, if the following rules are observed :

(i) The shelter must be drained, if only into an emergency tank.

(ii) Easily accessible stop-cocks must be provided.

Thresholds should be provided where there is any danger from water, not only from pipes in the basement, but from any main or sewer in the neighbourhood. Such thresholds may be formed by ramps instead of steps if it is feared that people might stumble over them. *Waste and soil pipes should decidedly not run through shelters.* Secondary rooms, which can be shut off from the shelter, might be excepted. As a rule, electric cables and conduits are not a source of danger and, in any case, certain electrical appliances are to be allowed for in a shelter. *Any transformer station must be separated by at least 18 in. of brickwork from the shelter.*

Architectural Front

R.I.B.A.

R.I.B.A. has been asked to assist in obtaining candidates to fill vacancies for a limited number of architectural draughtsmen in Corps of Royal Engineers. Particulars of qualifications and rates of pay can be obtained on application to Secretary, R.I.B.A. ; members or students who wish to be considered for these appointments, after considering the qualifications and rates of pay, are requested to submit their names to R.I.B.A.

Decided to proceed with the competitions for the following Prizes and Studentships : Ashpitel Prize ; R.I.B.A. (Donaldson) Medal at the Bartlett School of Architecture, University of London ; Banister Fletcher Silver Medal for an Essay (the date for submission of essays has been extended to January 31, 1940) ; Grissell Gold Medal (the date for submission of drawings has been extended to February 29, 1940) ; R.I.B.A. Prizes for Public and Secondary Schools ; Soane Medallion (as already announced, the date for submission of their final drawings by competitors admitted to the final stage of the competition has been extended to November 30, 1939).

Competition for the Archibald Dawnay scholarships has been completed and awards announced. Competition for Tite Prize has been completed and the decision of the jury announced. Competitions for following prizes and studentships have been postponed until after the war, and competitors who are at present eligible to take part will be considered as eligible when the competitions are resumed : Arthur Cates Prize ; R.I.B.A. Silver Medal for an Essay ; Hunt Bursary ; Owen Jones Studentship ; R.I.B.A. Silver Medal for Measured Drawings ; Neale Bursary.

It has been decided to suspend competitions for following prizes and studentships until after the war : Athens Bursary ; R.I.B.A. Alfred Bossom Research Fellowships for Post-graduate Research ; R.I.B.A. Silver and Bronze Medals for Students of Schools of Architecture recognized for exemption from the R.I.B.A. Examinations ; R.I.B.A. (Howard Colls) Travelling Studentship at the Architectural Association ; R.I.B.A. (Henry Jarvis) Studentship at the Architectural Association.

A.A.S.T.A.

In view of great success of series of lectures on A.R.P. and desire expressed for further meetings, A.A.S.T.A. has arranged a lecture on " Evacuation—an Analysis and a Programme," by Mr. Richard W. Toms, Secretary of the A.A.S.T.A. Evacuation Committee. It will take place in the Oak Room, Kingsway Hall, Kingsway, W.C.1, at 6.30 p.m., on Monday, November 13. Admission : Members, 6d. ; Non-Members, 1s. Unemployed free.

Building Front

Prices of Portland CEMENT and/or rapid hardening Portland cement delivered within the London Area have been increased by 2s. per ton.

Minister of Supply has made the Control of IRON AND STEEL (No. 4) Order, 1939, dated October 31, to operate as from November 1.

This Order fixes new prices for iron and steel products. Prices in operation prior to outbreak of war for main range of products had been fixed by the British Iron and Steel Federation with the approval of the Import Duties

Advisory Committee until October 31, and they were continued at their pre-war level by the original Order made by Minister of Supply and dated September 1, 1939, and Control of Iron and Steel (No. 2) Order, dated September 22. New prices take account of increased costs of principal imported raw materials including higher freight charges now in operation. Effect of Order is to increase the prices of billets and heavy steel by £1 per ton with corresponding adjustments in prices of finished products. Order also brings within schedule of maximum prices home iron ore and a number of iron and steel products not hitherto covered by statutory control. In case of home iron ore, maximum prices fixed are based on those at present in operation. Prices of those iron and steel products not hitherto included are generally on same basis as those of main range of products already subject to control. Under direction attached to new Order, pig iron as well as high-speed steel has been excepted from various exemptions from licences, and therefore in every case a licence is now required. Copies of the Order may be purchased from H.M. Stationery Office or from any bookseller.

Circular Notice R.L. issued to TIMBER trade on October 2 requires a return of stock to be made up at the end of each month and rendered to Area Officers within seven days. Return for November should, however, be related to stock position on December 2 and rendered to Area Officers on or before December 9.

DAVIDSON AND CO.—Supplying Sirocco A.R.P. fan units for electric drive or for hand operation in an emergency. They are rated in accordance with Home Office requirements to ventilate shelters capable of accommodating 25, 50 or 100 persons.

DAVIS BROS., ILLUMINATING ENGINEERS, LTD.—Specializing in lighting equipment for military camps, barracks and A.R.P. use; such as stage floodlights, exit and directional signs, etc.

DRYAD METAL WORKS.—A.R.P. products include blast-proof doors and manhole covers, stretchers from steel tubes painted aluminium, with strong reinforced hessian covers.

HOLOPHANE.—Big demand for new A.R.P. 0.2 reflector. This unit (for

covered loading bays, corridors, entrances, etc.) consists of an opaque metal cover fitted over a prismatic reflector and is designed to give efficient and uniform lighting over an extensive area when spaced at a distance apart of twice mounting height above floor. Possible with this reflector to perform work on benches and platforms that could not be done with lower intensity units. Dimensions: Height, base to shade ring, 5¼ in.; diameter overall, 6¼ in. Price (minus lampholder), 6s. 6d.

INDESTRUCTIBLE PAINT CO.—Specializing in camouflage technique. Products include a complete range of oil paints and oil-bound distempers to approved Government specifications for all camouflage purposes. Also manufacturing complete range of A.R.P. materials—black-out paint and distemper, blue varnish.

*Change of Address**

JENKINS, ROBERT, & CO., LTD.
New address for London office: "Brackley," Rowhill, Hextable, Swanley, Kent.
CELLACTITE AND BRITISH URALITE LTD.
Sales Office, Higham, Nr. Rochester, Kent.

PHILIP SCHOLBERG on Equipment

Electricity Costs in London

I see that the electrical industry is beginning to get worried over the possibilities of the black-out and the restrictions on the use of current. Consumers are now allowed to use as much as they did before the war, but the shop window and street lighting load has always been a source of profit to the supply companies, and many of them fear that the present regulations will lead to a general increase in charges. The wholesale evacuation of domestic consumers also leads to considerable loss of revenue, and at least one supply company has taken the precaution of terminating its existing two-part tariff agreements as from the end of the year. Under the present arrangements there are a number of anomalies which should undoubtedly be corrected. Prepayment meters are apparently to be free from restrictions only when the load is for lighting only, whereas gas consumers can apparently use unlimited supplies for any purpose. As a set-off, however, users of electric vehicles can use as much electricity as they like, so we may yet see the wealthy being wafted silently about in the electric broughams beloved of Mr. Oppenheim, though it may be assumed that any considerable increase in their use will automatically lead to the usual restrictions. I am encouraged, however, by one remark from a source which cannot be said to be altogether disinterested. "Even if a rise in prices should unfortunately occur electricity will still retain its pre-eminent position as the cheapest and cleanest form of light, heat and power." So after all the fuss and bother we have had about the relative costs of heating by different fuels, it is nice to know that coal and gas were never really in the running at all.

* A full list of changes of address was published in THE ARCHITECTS' JOURNAL for October 19, 1939.

Registration

On the finding of the discipline committee that he had been guilty of unprofessional conduct in that he had issued a monthly circular advertising his architectural services, the Architects' Registration Council of the United Kingdom has directed the removal from the register of the name of an architect practising in the City. The council has also ordered that he shall be disqualified from registration for a period of five years.

This is the first case in which the council has announced its intention of removing a name from the register in exercise of its power under section 7 of the Architects (Registration) Act, 1931.

Section 7 of the Act under which the council has acted provides that the council must give notice to an architect of its intention to remove his name from the register and consider any representations that he may make within three months. A disciplinary regulation provides that his name shall not be removed pending the hearing of such representations. After considering any representations the council may confirm or withdraw its resolution. An architect removed or disqualified has the right of appeal to the High Court.

LETTER

Billeting

SIR,—I trust you will permit me to make one or two comments in connection with the leading articles which appeared in the JOURNAL of October 26 and November 2 concerning the arrangements for billeting and the provision of camps for evacuated school-children.

The proposals which you make, in effect, multiply by about twenty times the present Government scheme for camp schools. (In this connection I would like to point out that your statement that "no camp schools were promoted by the Government" is not correct, although it is true that the scheme is far from complete.) But I would suggest that any adequate solution to such a complex problem as evacuation must involve much more than the building of camp schools for a certain number of the school-children. The full social implications of evacuation must be recognized, the solution must develop out of the present

position in the reception areas, and the fullest permanent benefit must be afforded to the country people as well as the town children.

Evacuation has involved a veritable social upheaval. Town and country people, accustomed to environments of very different types, have suddenly been brought face to face, and the realities of their existence, both the best and the worst aspects, have been revealed. One of the aims of any solution must be the resolving of the differences that inevitably arise. Only if this is done will evacuation be made a success and it will have the further advantage that it will lead to a fuller understanding between town and country dwellers, as well as being of material benefit after the war as a result of the constructive measures which will have to be undertaken.

Your suggestion of camps *versus* billets for school-children does not envisage the problem as it actually is. Billeting must, I submit, remain the method of dealing with the largest numbers, at least for a considerable time. Even your suggestion for the provision of camp schools for half a million school-children deals with only one-third of the school-children who should leave the evacuation areas.

There is a great deal of evidence to show that, in many cases, billeting can be made a success *if* provision is made for the whole-time education of both the evacuated and local children and for communal meals for at any rate the evacuated children. In this way the present conditions could be stabilized: the householders regularly relieved of the care of the children, and the teachers with a clear responsibility for the children throughout the day. The new buildings required for these purposes could be used to implement the school buildings for the country children in peace-time, and it is unnecessary for me to point out how seriously these additional facilities are required.

New residential camp schools are required, in the main, for those children at present in reception towns, where they are far from safe and where, in many cases, additional facilities cannot be provided. Such schools are also required for many of the children who have never left the evacuation areas.

The question of the "under fives" is not mentioned in your articles, although the problem here is even more serious than that of school-children. The evacuation of these children accompanied by their mothers has proved a failure. The great majority are now in the evacuation areas, their mothers have either returned with them or never having left in the first place. In order to prevent those still in the reception areas from returning, it is of supreme importance that facilities for a social life for the mothers should be provided. The setting up of residential nursery schools, with all that this implies both as regards organization and accommodation, will certainly be found to be the only sound solution.

In conclusion may I endorse your statement that evacuation is "the one big chance of social improvement that can occur in this war," and add that, as far as architects are concerned they must face up to the full social implications of the problem? They must look for support for their proposals from everyone concerned with evacuation, not least the teaching and medical professions and the local authorities. Discussions limited to camps *versus* billets will show them as rather out of touch with reality.

RICHARD W. TOMS
(Secretary, A.A.S.T.A. Evacuation Committee.)

MUNICIPAL OFFICES EXTENSION, BROMLEY

DESIGNED BY C. COWLES-VOYSEY

MAIN ENTRANCE

GENERAL AND SITE—*Extensions have been made to the existing municipal offices by the addition of an independent block to the south connected by covered way. The entrance to the new building is on the centre line in Widmore Road. Its floor area is approximately equal to the old building and contains offices for the Borough Engineer's Department (4,000 sq. ft.) and the Medical Officer of Health (3,000 sq. ft.) on the ground floor. A new Council Chamber for 40 members is on a mezzanine floor approached from the main stairs, and a suite of committee rooms, a Mayor's parlour, and other members' rooms are on the first floor. Adjoining the Council suite are the offices for the Town Clerk's Department (3,300 sq. ft.). The old building is allocated to the departments of the Borough Treasurer and the Education Officer. A gallery in the Council Chamber, having independent staircase approach, is provided for the public, with accommodation for 50 people. A car park and bicycle shelter is placed in the rear of the new building and a basement contains storage and strong-room accommodation.*

SOUTH ELEVATION

CONSTRUCTION AND FINISHES—*The new building, having basement, ground and first floors, follows the old building in its main lines and general design. A reinforced concrete frame has been employed with cavity brick curtain walls and fire-resisting floors and staircases also of reinforced concrete. Light steel trusses carry the pitched roofs, which are covered with Westmorland slates. Flat roofs are covered with asphalte, and the external walls are faced with sandfaced handmade bricks, with stone dressings. The windows are double-hung sashes, painted white.*

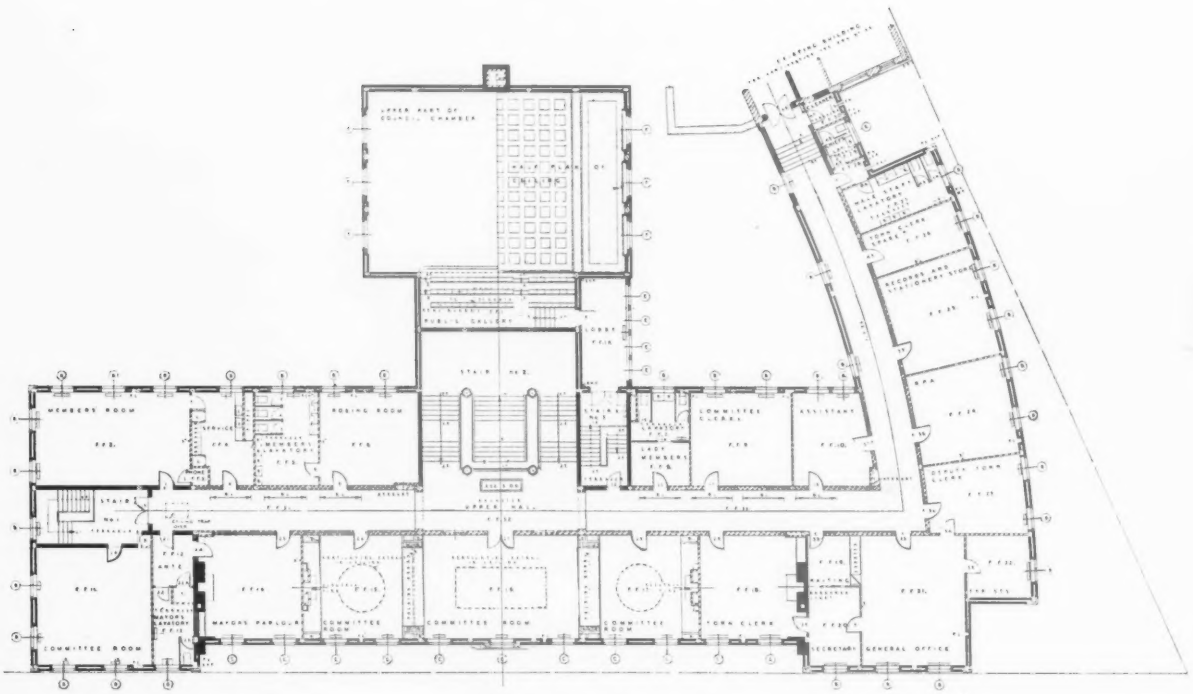
SERVICES—*Heating is by means of gravity-fed coke-fired boilers and a low-pressure hot-water system. An air-conditioning plant is provided for the Council Chamber and Committee Rooms.*

The general contractors were G. F. Wallis and Sons, Ltd.; for list of sub-contractors, *see page 583.*

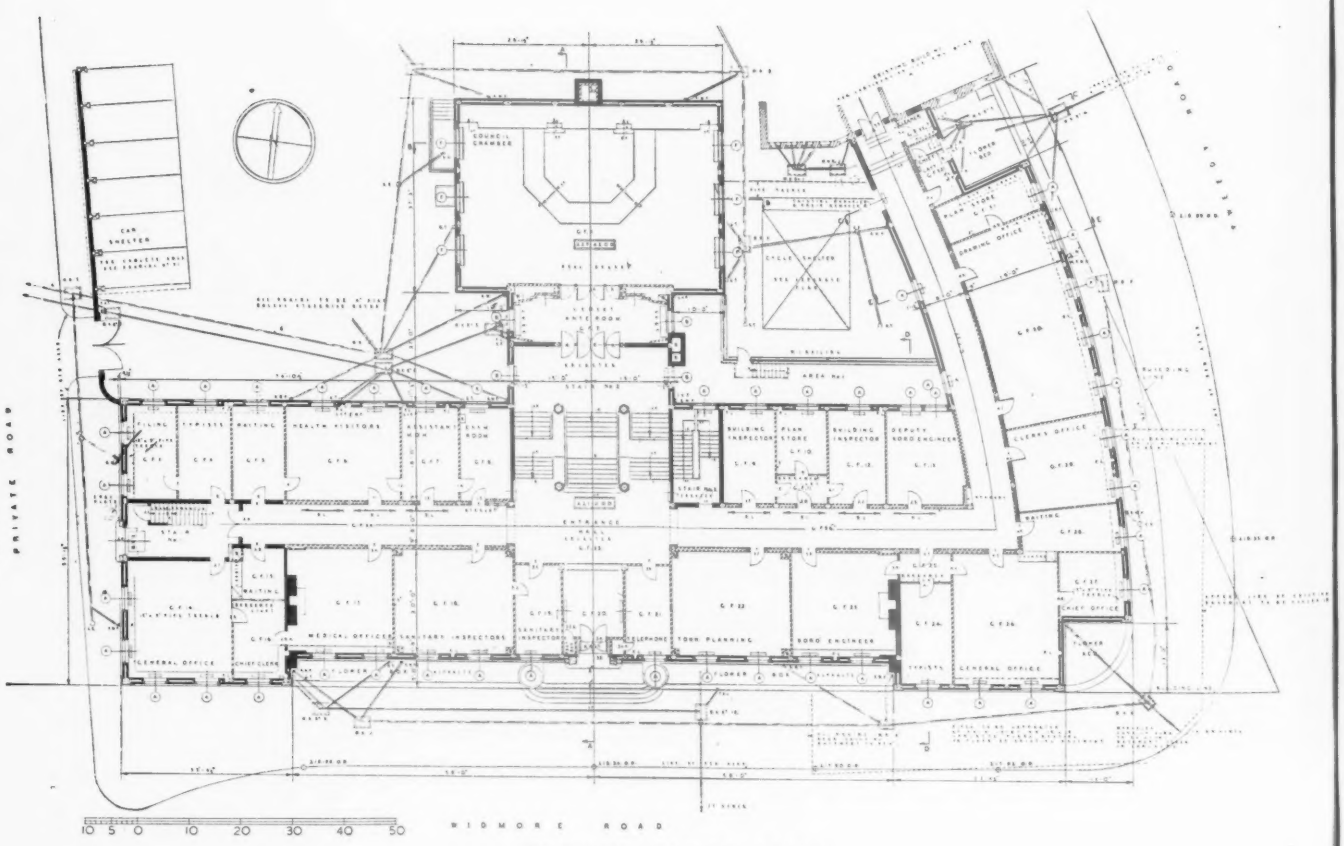
MUNICIPAL OFFICES EXTENSION, BROMLEY

TWO VIEWS OF THE COMMITTEE ROOMS

• DESIGNED BY C. COWLES-VOYSEY



FIRST FLOOR PLAN



GROUND FLOOR PLAN

MUNICIPAL OFFICES EXTENSION, BROMLEY

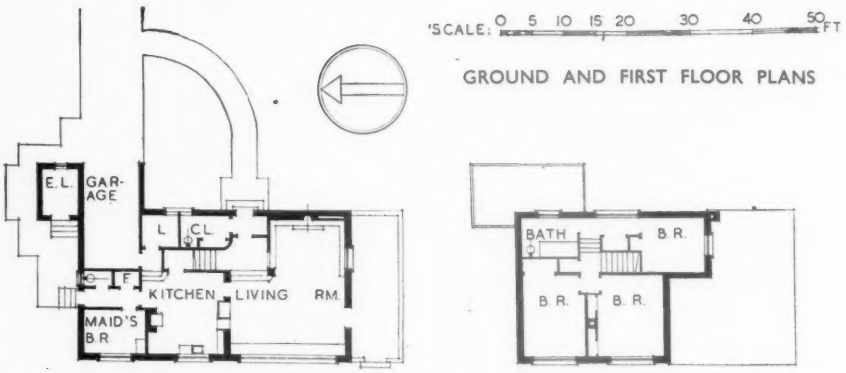
LEFT, ENTRANCE HALL FROM COUNCIL CHAMBER ANTE-ROOM DOORS. BOTTOM, STAIRCASE FROM MAIN ENTRANCE.

TOP, MAYOR'S PARLOUR. CENTRE, TOWN CLERK'S ROOM. BOTTOM, MEMBERS' ROOM.

DESIGNED BY C. COWLES-VOYSEY

HOUSE AT PUTSBOROUGH, DEVON

VIEW FROM SOUTH-EAST



GROUND AND FIRST FLOOR PLANS

GENERAL—*Week-end house built on a very exposed site near the sea.*

CONSTRUCTION AND FINISHES—*Walls: 11-in. brick cavity walls, colour-washed externally. External window heads have concrete lintols cut while green to look like brick-on-end heads; this proved satisfactory under colour-wash. Roofs: joists, boarding and firring and bituminous roofing with ceilings of compressed fibre board, plastered. Internal walls: 4½-in. brick and moler blocks. Standard metal windows are fitted.*

COST—*£1,846 (contract price including entrance gates, drive, paths, terrace, etc.), 1s. 7d. per ft. cube.*

DESIGNED BY J. STAFFORD AND TERENCE SNAILUM

TRADE NOTES

[*By PHILIP SCHOLBERG*]

An All-purpose Conduit Box

A NEW all-purpose conduit box known as the Corbelux has just been announced by the G.E.C. The chief merit of this design is its flexibility, for it can be used for practically every normal purpose for both flush and surface work throughout a complete installation. In addition to its use as a junction box, it will accommodate any standard switch or socket, including all 2-in. mounting B.S.S. accessories such as lampholders and ceiling roses, so that there is no need for suppliers to hold a vast selection of stock sizes.

The one-way box consists of a 3 in. by 3 in. by 1½ in. grey iron casting with ⅛-in. walls. Conduits up to inch diameter can be brought in on all the four sides or the back, and there is still plenty of space inside for equipment and cable. In the back of the box is a tapped hole to take a sherardized steel screw which either fixes the cover plate when the box is used as a junction, or a plate and grid when the box is to be used for mounting switches or other accessories. Three different arrangements of the plate and grid are possible: the overlapping type, the protected surface type, and the B.S.S. surface type. Any one of these arrangements may be centrally suspended in the box by means of the central fixing screw, and it is this central suspension of the grids which gives the system its flexibility.

Various fixing centres are provided by the grid. The centre screw, fixing the grid to the box, allows a full lateral and tilt arrangement; the two grid attachment screws give the necessary back to front adjustment to allow for the variation in depth of the accessories and the thickness of the front plates. After the plastering has been completed, the overlapping plate, being then in position, can be painted with the rest of the decoration. For surface conduit the surface type intermediate plate, which reduces the opening in the box to suit B.S.S. equipment, is used with the standard grid and fits neatly into the box. As the back to front adjustment is still available, all standard flush mounting equipment for use on the surface and the usual semi-sunk range can be easily fitted.

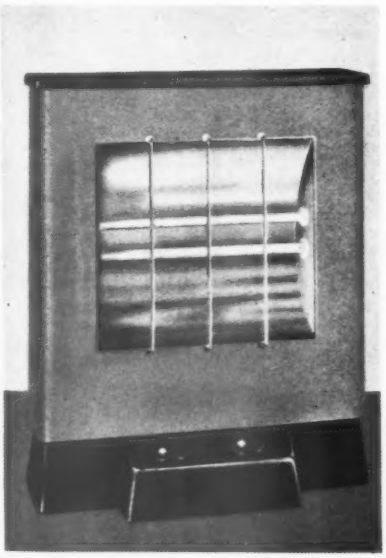
The principle of the one-way box described above is extended up to six ways, a com-

plete series of boxes being available. In the multi-way boxes each standard grid, fixed at 2½ in. centres, is independently mounted, allowing any combination of accessories to be used. Each accessory can be fitted with its own 2⅜ in. by 2⅜ in. front plate, so that special multi-way fronts are not needed. The boxes can be easily drilled, and in general it is suggested that the drilling should be carried out on the site, though boxes can be supplied ready drilled if necessary.

A system of this kind sounds complicated when it has to be described in words, and it is, of course, more complicated than the straightforward boxes now in general use. But from the point of view of the fitter and the wholesaler, it has very definite advantages, and it almost makes the excuse of not having the right fitting impossible. This seems to be one of those instances where a little extra complication is worth the trouble because it saves far more than it loses.—(*The General Electric Co., Ltd., Magnet House, Kingsway, London, W.C.2.*)

Electric Fires

A new catalogue from Bellings shows several very sensible designs, one or two of which are new this autumn. In particular, the new Adelphi type seems to me excellent. It has a parabolic reflector of the now usual type, but



the most interesting part about it is that it has foot-operated switches. Ten or twelve years ago there was a mild fashion for the lighting switches operated by twin pushes linked together so that a push inwards switched the light on and at the same time pushed out the other button for switching off again. An enlarged form of these switches has been fitted to this fire, and they should save a good deal of irritation. The ordinary fire has a switch which is very noisy (one wonders why in these days when a slow break is the thing for A.C.) and which is also very stiff. The downward push for switching on is simple enough, but the room gets hot and so does the top of the fire. To switch off the second element you push upwards on the switch with your foot and the fire falls over backwards; you burn your hand if you try to hold the fire down. If you put one foot on top of the fire you can't use the other foot for switching off because you need it for standing on, so you are reduced to one foot on the fire and bending down to switch off by hand, an attitude which brings your knee somewhere near your ear. With this new Belling fire there is only the downward push with a shoe whether you are switching it on or off. The design, too, is pleasant without any of the affectations one so often finds in the lists of our less intelligent manufacturers.—(*Belling & Co., Ltd., Bridge Works, Enfield, Middlesex.*)

THE BUILDINGS ILLUSTRATED

MUNICIPAL OFFICES EXTENSION, BROMLEY (pages 577–581). Architect: C. Cowles-Voysey. General contractors, G. E. Wallis and Sons, Ltd. Sub-contractors and suppliers included: Grierson, Ltd., electrical installation; Young, Austen and Young, Ltd., heating, hot water and ventilating; Redpath, Brown & Co., Ltd., structural steelwork; Pontifex and Emanuel, sanitary fittings; Stoner and Saunders, Ltd., cast lead rainwater pipes; J. and E. Hall, Ltd., ash hoist; Luxfer, Ltd., skylights, laylights and patent glazing; Haywards, Ltd., iron staircase; W. Bainbridge Reynolds, Ltd., balustrading; Bratt, Colbran & Co., Ltd., fireplaces; Chatwood Safe Co., Ltd., strongroom doors and ventilators; G. H. Turner, Ltd., electric fires; Constructors, Ltd., cycle parks; Dictograph Telephones, Ltd., internal telephones; Roberts, Adlard & Co., Ltd., roof slating and Colliers' facing bricks; Art Pavements and Decorations, Ltd., Ancaster stonework; Eric Munday and Joseph Armitage, carving in stone; May Acoustics, Ltd., acoustic finishes; Merryweather and Sons, Ltd., fire hydrants; W. Larkins, lightning conductors; J. P. White and Sons, Ltd., special joinery and furniture; Yannedis & Co., Ltd., door furniture; Mrs. Anne Brandon-Jones, heraldic hangings; Alex. Tosland and Son, furnishings; G. H. Turner, electric light fittings; Gillett and Johnston, Ltd., clocks.

PRICES

[By O. A. DAVIS]

THE control by the Government of timber, iron, steel, lead, copper, zinc and certain wallboards has brought to a standstill practically all building except that required for Government or Civil Defence purposes. It is to be hoped that when the Government's most urgent needs are satisfied, these restrictions will be relaxed to some extent, but in the meantime those architects and contractors who have work in hand are naturally anxious about prices.

Conflicting evidence and the lapse of time necessary between sending out enquiries and publication are liable to make a few prices out of date even at the time of publication; in fact, it is only fair to those who are willing to quote to say that the prices given should be taken as a guide rather than as actual quotations.

Generally—apart from wall tiling, brasswork and some of the commodities controlled by the Government—prices in the London area appear to remain very much the same as those ruling immediately before the outbreak of war, but if they are to prove reliable more attention than usual should be given to the factors governing particular jobs.

War Risk Insurance and the cost of transport are two factors which are of increasing importance. The effect of War Risk Insurance is not fully known, as before the announcement that the first month's premium was to be credited, various attitudes were adopted by different merchants. In view of this difficulty, nothing has been added to the Current Market Prices given in the JOURNAL for the time being, though a percentage will be added as soon as the position is clear. The cost of transport to various parts of the country obviously cannot be taken into account, and those who are interested in prices in the provinces must realize that the distance from the source of supply to the job will make a much bigger difference than has been the case before.

The fixed prices of timber (for building purposes) are contained in The Control of Timber (1) Order, 1939. Rather than alter these official figures by adding the assumed cost of transport, it was thought better to alter the system previously adopted in the JOURNAL and to give, under the headings of carcassing and joinery timber, a selection of the fixed maximum prices to consumers at the Port of London. Prices at other ports and from stock can be seen in the Order referred to.

The prices given for plywoods, blockboards and hardwoods are also extracts from the Order, but are the maximum prices to consumers ex dock or warehouse in the United Kingdom, free on lorry or rail if available without extra charge.

The prices in the JOURNAL for wallboards and fibre boards controlled under The Control of Paper (No. 1) Order, 1939, are also the fixed maximum prices contained in that Order, but in this case the prices include for delivery.

In the case of iron and steel, fixed maximum prices are given in The Control of Iron and Steel (No. 2) Order, 1939, but as these prices would probably mean little to architects at any rate, they have not been reprinted in detail and the prices given in the JOURNAL are merely based on the official figures given.

Non-ferrous metals which are controlled by The Control of Non-Ferrous Metals Order, 1939, again have fixed maximum prices for the raw materials.

The prices in the JOURNAL for finished products are merely based on them.

In the future, extracts from the official Orders controlling the cost of materials will be published whenever possible; where the control is of raw materials or the official figures are unlikely to be of much value to architects prices given in the JOURNAL will be based as far as possible on these controlled prices. Quotations for commodities which are not controlled will be obtained whenever possible, but inasmuch as they can less frequently be based on actual contracts, such quotations will be rather more theoretical than usual and must be taken as a guide and not a fixed price. As soon as the cost of War Risk Insurance has definitely been established, this will be included in the prices published. The cost of transport to different localities will always be impossible to deal with in a publication such as this, and it will have to remain a matter to be considered by each individual in the light of experience.

The complete series of prices consists of four sections, one section being published each week in the following order :—

1. Current Market Prices of Materials, Part I. (published last week)
2. Current Market Prices of Materials, Part II.
3. Current Prices for Measured Work, Part I.
4. A. — Current Prices for Measured Work, Part II.
   B. — Prices for Approximate Estimates.

PART 2

IMMEDIATELY below, Messrs. Davis and Belfield mention the principal changes which have occurred in the last month. Similar notes, and the deductions that may be drawn from them, will be published on this page each month.

WAR NOTE.—Prices generally are subject to war clauses as stated on quotations and contracts.

Attention is drawn to the prices of deal scantling, boards, floorings, plywood, blockboard, hardwoods and galvanised iron sheets which do not include delivery and fibre board including delivery. These prices are maximum prices controlled by the Government.

Prices vary according to quality and quantity ordered.

Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit.

CURRENT MARKET PRICES OF MATERIALS

BY DAVIS AND BELFIELD

JOINER

The following timber prices are maximum prices to consumers at Port of London for White Sea Classification and include reloading on to transports at depot, for orders of not less than £15 in value of any one size and quality.

The cost of timber at ports other than Port of London may be seen in the Control of Timber Order (No. 1), 1939.

20s. per standard may be added to the port prices for timber bought from stock, i.e. stored in inland yards outside port areas.

20 per cent. extra may be charged on orders of less than £15 in value of any one size.

10 per cent. may be charged on orders for selected lengths plus repiling charges which may be in the neighbourhood of 5s. per standard.

The cost of transport to the site (approximately 30s. per standard) must be added to all prices, and the cost of transport from port to yard in cases where timber is bought from stock must also be added.

Sawn Redwood commonly known as Builders' Yellow Deal.

	2nd Per Standard £ s. d.	3rd & U/S Per Standard £ s. d.
4 × 11 Scantling	42 7 6	32 12 6
3 2½/2 × 11	41 5 0	31 10 0
4 × 10/9	39 17 6	29 2 6
3 2½/2 × 10/9	38 15 0	28 0 0
4 × 8	31 15 0	25 2 6
3 2½/2 × 8	30 12 6	24 12 6
4 × 7	30 17 6	24 17 6
3 2½/2 × 7	29 15 0	24 10 0
4 × 6	—	24 10 0
3 2½/2 × 6/6½	—	23 17 6
2 in. and up × 5/5½	—	22 7 6
2/3 × 3/4½	—	23 7 6
Boards		
1 in. and up × 11	45 17 6	37 0 0
1 in. and up × 10/9	42 15 0	32 12 6
1 in. and up × 8	33 10 0	27 7 6
1 in. and up × 7	33 0 0	26 17 6
1 in. and up × 6½/6	—	25 7 6
1 in. and up × 5½/5	—	24 17 6
1 in. and up × 4½/3	—	24 15 0

JOINER—(*continued*)

Extras for thin boards :—	2nd Per Standard £ s. d.	3rd & U/S Per Standard £ s. d.
¾ in./⅞ in.	0 5 0	0 5 0
⅝ in.	0 10 0	0 10 0
½ in./⅝ in.	0 15 0	0 15 0

Floorings

All Russian, Swedish Gefle and northwards u/s quality.

Nominal sizes—	Per Standard £ s. d.
11 in.	34 7 6
9/10 in.	30 7 6
7 in.	24 17 6
6½/6 in.	24 12 6
5½ in.	24 7 6
5 in.	24 2 6
4½/4 in.	23 12 6

Douglas Fir.—Floorings and matchings, weatherboard, etc. No. 2 Clear and Better (including 15% No. 3 Clear).

	Per Standard £ s. d.
4″ wide random grain, kiln dried	21 7 6
6″ " " " " "	22 17 6
4″ " edge " " "	26 17 6
6″ " " " " "	30 7 6

Asbestos-Cement :—

● 5/32″ Semi-compressed flat building sheets, grey	per yard super	1/5½
● 3/16″ Ditto	per yard super	1/6
● ¼″ Ditto	per yard super	2/1½
● ¼″ Metal reinforced flat building sheets	per yard super	3/7½

Prices are for orders of two tons and over and are subject to 5% trade discount.

Wall Boards :—

● ¼″ Asbestos wallboard (in sheets 8′ 0″ × 4′ 0″, 10′ 0″ × 4′ 0″ and 12′ 0″ × 4′ 0″) under 5,000 feet super	per foot super	–/3½
● 3/16″ Ditto	per foot super	–/3

The following prices are subject to 10 per cent. trade discount :—

Asbestos-cement stipple glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″)	per yard super	6/6

● Items marked thus have risen since October 5.

CURRENT PRICES

BY DAVIS AND BELFIELD

JOINER AND STEEL AND IRONWORKER

JOINER—(*continued*)

Asbestos-cement, plain white glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″)	per yard super	8/6		
Marble glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″) ..	per yard super	7/–		
• ¼″ Fibre board	per yard super	2/5½		
		25-75 yards	150–300 yards	Over 600 yards
⅛″ Fireproof plaster board	per yard super	2/2	1/10	1/6
¼″ Ditto	per yard super	2/–	1/8	1/4
Joint tape (approx. 250 feet run)	per roll	..	..	1/6
Joint filler	..per lb.	..	..	–/4

Plywoods :—

Prices are maximum prices to consumers and are for not less than £15 in value of any one size and quality in one delivery. For purchases less than £15 in value add 20 per cent.

Prices are ex docks or warehouse in the United Kingdom free on lorry or rail if available without extra cost.

	4 mm.	5 mm.	6 mm.	9 mm.	12mm.
		3/16″	¼″	5/16″	⅜″
Dry cemented birch and alder (A) per square	23/11	28/3	33/1	46/9	59/5
Gaboon mahogany (A) per square	19/6	23/9	29/–	50/–	65/6
Oregon and Canadian pine (A) per square (96″ × 36/48″)..	—	24/9	25/10	29/9	32/11
Luaun (standard size 72″ × 24/48″ and 84″ × 24/48″) 1st, per square	13/3	15/–	19/9	—	—
Japanese oak plain 1st quality standard sizes up to 72″ × 36″, per square	22/6	26/–	28/–	—	42/6
Ditto figured ditto, per square	32/6	36/–	40/–	—	65/–

Blockboards :—

Alder :— Thickness		Boards 60″×116″	Boards 72″×116″
½″	per square	55/–	56/6
⅝″	per square	62/–	63/6
¾″	per square	71/–	73/–
⅞″	per square	75/–	77/–
1″	per square	84/–	86/–
1¼″	per square	108/–	111/–
1⅜″	per square	128/–	131/–
2″	per square	155/–	158/–

Birch :— Thickness		Boards 60″×84″ & 54″×72″	Boards 60″×140″
½″	per square	52/6	55/–
⅝″	per square	55/1½	57/9
¾″	per square	60/4½	63/3
⅞″	per square	65/7½	68/9
1″	per square	73/6	77/–

Prices are for complete bundles.

Hardwoods

Prices are maximum prices to consumers and are for not less than £15 in value of any one size and quality in one delivery. For purchases less than £15 in value add 20 per cent. Prices are free on lorry (or rail if available without extra cost) ex Dock or Yard in the United Kingdom of Great Britain and Northern Ireland.

The prices are for fair average specification and for standard grades as imported and the items mentioned are subject to a reasonable addition for selection.

	1″	1¼″	1½″	2″	2½″	3″
American oak (plain) per foot cube	7/–	7/6	7/6	8/6	10/6	11/–
American oak (quartered) per foot cube	9/–	9/6	9/9	10/6	—	—
Japanese oak (plain) per foot cube	9/–	9/6	10/–	11/–	11/6	12/6
Japanese oak (quartered) per foot cube	10/–	10/6	11/–	11/6	12/6	13/–
Walnut, European per foot cube	16/–	16/6	17/–	18/–	19/–	20/–
Teak, Burma.. „ „	11/6	11/6	11/6	11/6	11/6	11/6
Iroko .. .. „ „	9/–	9/–	9/–	10/–	10/–	10/–

JOINER—(*continued*)

	1″	1¼″	1½″	2″	2½″	3″
Mahogany, Honduras per foot cube	11 6	11 9	12 3	13/6	14/–	15/–
Mahogany, Cuban per foot cube	10 6	10 9	11/6	12/–	12/–	13/–
Birch .. .. „ „	5/–	5 3	5/6	6/–	7/–	7/3
European oak (plain) per foot cube	7/–	7/6	7/6	8/6	9/6	10/–
European oak (S.E. quartered) .. per foot cube	10/–	11/–	11/6	12/6	12/6	13/–

Sundries

Slaters or sarking felt	per yard run	–/6
Roofing felt	per yard run	–/8
Bituminous hair felt	per roll	33/–
All rolls 25 yards long by 32″ wide.		
Cork slabs, 1″ thick (3′ 0″ × 1′ 0″)	per foot super	–/4½
„ 2″ thick (3′ 0″ × 1′ 0″)	per foot super	–/8
Slagwool	per cwt. (approx.)	12/–
Building paper in rolls of 100 yards, 1-ply, 60″ wide (B.I.80 and L.G.I.80)	per yard run	–/9
Ditto, 1-ply, 60″ wide (B.I.120) ..	per yard run	1/1

" Cabots " Quilt :—(Ex Works Twelve roll lots delivered carr. free.

• Double ply	per roll 45/6		per half roll	25/9
All rolls 28 yards long by 36″ wide. Special terms for quantities.				
Cut steel clasp nails, 1″	per cwt. 29/9	4″	per cwt.	20/9
„ „ floor brads, 2″	„ 20/–	3″	per cwt.	19/6
Bright oval wire nails 1″	„ 29/3	4″	per cwt.	21/3
Galvanized wire staples with slice cut points	1″×12 gauge		per cwt.	31/–
Scotch glue			per cwt.	65/–

Floor Clips :—

		£ s. d.
One leg floor clip	per 1,000	7 10 0
2″ short leg floor clip	per 1,000	7 10 0
2″ Regular floor clip	per 1,000	7 15 0
3″ „ „	per 1,000	8 8 0
2″ Regular ceiling clip	per 1,000	7 15 0
Single leg ceiling clip (7½″)..	per 1,000	10 10 0

Special terms for quantities.

STEEL AND IRONWORKER

Steelwork

		£ s. d.
Basis price for rolled steel joists sections 5″×3″ to 16″×6″, in 10 ft. to 50 ft. lengths	per ton	11 17 6
Extras on above for :—		
9″ × 7″ Section	per ton	0 5 0
4″×3″, 5″×2½″, 10″×8″, 12″×8″, 14″×8″ and 16″×8″ to 20″×7½″ sections inclusive	per ton	0 10 0
3″×1½″, 3″×3″, 4″×1¾″, 4½″×1¾″ and 24″ × 7½″ sections	per ton	1 0 0
Channels, angles and tees	per ton	13 10 0
Mild steel plates	per ton	13 10 0
Screw bolts	per ton	31 0 0

Fabricated Steelwork

		£ s. d.
Joists cut and fitted	per ton	16 10 0
Stanchions, ordinary sections with riveted caps and bases	per ton	20 0 0
Stanchions, compound	per ton	28 0 0
Plate girders	per ton	24 10 0
Framed roof trusses, 25′ 0″ span	per ton	25 0 0
„ „ „ 60′ 0″ span	per ton	28 0 0

These prices are *ex mills*. For material *ex stock*, definite quotations should be obtained.

Prime Galvanized Corrugated Iron Sheets

		£ s. d.
24 gauge, *ex mills delivered station or siding*	per ton	17 5 0
Galvanized roofing nails 2½″	per cwt.	1 17 6
Galvanized roofing washers..	„ „	2 5 0

• **Items marked thus have risen since October 5.**

CURRENT PRICES

BY DAVIS AND BELFIELD

PLASTERER, PLUMBER AND INTERNAL PLUMBER

PLASTERER

Plaster and Cement

		1-ton loads	5-ton loads	
Sirapite (coarse)	per ton	70/–	64/–	
„ (fine)	per ton	78/–	—	
Victorite No. 1	per ton	85/–	78/6	6-ton loads
„ No. 2 or non sweat	per ton	80/–	73/6	
Thistle (browning, haired and pink finish)	per ton	70/–	64/–	
Thistle (fine)	per ton	78/–	—	
Pink plaster	per ton	66/–	—	
White plaster	per ton	78/–	—	
Keene's pink	per ton	112/6	—	
Keene's white	per ton	117/6	—	
Super Carbo	per ton	—	47/6	4-ton loads
Carbo-setting	per ton	—	57/6	

	1 ton upwards £ s. d.
Cullamix No. 2 cream (rendering mixture) per ton	5 10 0
„ No. 3 cream „ „ per ton	5 10 0
Snowcrete mixture „ „ per ton	5 5 0

Sundries

		Less than 150 yds.	Less than 300 yds.	Over 300 yds.
• Sharp washed sand	per yard cube			8/9
Cow hair	per cwt.			40/–
Goat's hair	per cwt.			55/–
$\frac{3}{16}$″ laths	per bundle			2/–
$\frac{1}{4}$″ laths	per bundle			2/4½
Expanded metal lathing, 9′ 0″ × 2′ 0″ $\frac{1}{8}$″ mesh × 26 gauge	per yard super			–/11½
Lath nails (galvanized) 1½″ × 14 gauge	per cwt.			48/6
„ (bright wire) „ „	per cwt.			27/–
⅜″ Plaster board	per yard super	1/–	–/11	–/10
1½″ Galvanized nails	per lb.		–/5	
Scrim cloth in 100-yard rolls	per roll		2/3	

Wall Tiles

Commercial quality.		
Ivory, white, etc., glazed 6″ × 6″ × ⅜″	per yard super	11/2
Angle beads (1½″ wide)	per yard run	1/4½
„ „ (1″ „)	per yard run	–/11
Rounded edge tiles	per yard run	2/9¾
Coloured enamelled bright glazed, 6″ × 6″ × ⅜″	per yard super	15/9
Angle beads (1½″ wide)	per yard run	1/6½
„ „ (1″ „)	per yard run	1/0½
Rounded edge tiles	per yard run	2/10½
Eggshell gloss enamelled, 6″ × 6″ × ⅜″	per yard super	16/6
Angle beads (1½″ wide)	per yard run	1/9½
„ „ (1″ „)	per yard run	1/2½
Rounded edge tiles	per yard run	3/–

PLUMBER

Lead

✱3½ lbs. and upwards milled sheet lead in quantities of 5 cwts. and upwards	per cwt.	27/–
Add if cut to sizes	per cwt.	3/–
Lead ternary alloy, No. 2 quality extra over sheet lead	per cwt.	7/–
Allowance for old lead delivered to merchant	per cwt.	13/9

Cast Iron Rainwater Goods (Painted or Unpainted)

The following prices for rainwater pipes and gutters are subject to 20 per cent. trade discount, and the prices of the fittings are subject to 5 per cent. and 20 per cent. trade discount.

Rainwater Pipes

	2″	2½″	3″	3½″	4″	4½″	5″	6″
Round pipes per yard	2/8½	2/9¾	3/7¾	4/0¾	4/9½	6/1¾	7/2¼	9/2
Shorts, 2′ 0″, 3′ 0″ and 4′ 0″ extra per yard	–/3¾	–/3¾	–/3¾	–/3¾	–/3¾	–/5	–/5	–/5
Bends	each 1/9	2/–	2/6	3/–	3/7	5/–	6/6	8/5
Offsets, 4½″ and 6″ projection	each 2/2	2/8	3/–	3/5	4/4	6/3	7/6	9/10
Offsets, 9″ projection	each 2/10	3/2	3/9	4/8	5/7	7/6	8/10	11/2
Branches, single	each 2/7	3/1	3/9	4/4	5/3	7/6	8/5	13/1
Shoes	each 1/6	1/9	2/–	2/8	3/–	4/4	5/5	7/6

• Items marked thus have risen since October 5.

PLUMBER—(*continued*)

Square and rectangular pipes.	
3″ × 3″	per yard 6/9½
3½″ × 3½″	per yard 8/4
4″ × 2″ or 2½″	per yard 7/4¾
4″ × 3″	per yard 7/4¾
4″ × 4″	per yard 9/0¾
4½″ × 3″	per yard 8/5¼
5″ × 3″ or 3½″	per yard 9/7

Gutters

	3″	3½″	4″	4½″	5″	6″
Half round gutters per yard	1/9¼	2/1	2/1	2/2¼	2/4¾	3/7¾
Shorts 2′ 0″, 3′ 0″ and 4′ 0″ extra per yard	–/2½	–/2½	–/2½	–/2½	–/3¾	–/3¾
Angles and nozzle pieces each	1/5	1/7	1/9	2/–	2/2	3/1
Stop ends each	–/5	–/5	–/7½	–/9	–/10½	1/–
Ogee gutters per yard	2/1	2/3½	2/4¾	2/6	2/9¾	3/10¼
Straight back and shorts 2′ 0″, 3′ 0″ and 4′ 0″ extra per yard	–/2½	–/2½	–/2½	–/2½	–/3¾	–/3¾
Angles and nozzle pieces each	1/11	1/11	2/–	2/4	2/8	3/3
Stop ends each	–/6	–/7½	–/9	–/10½	1/–	1/3

Mild Steel Rainwater Goods

The following prices are subject to 12½ per cent. trade discount.

24 Gauge rainwater slip jointed pipes.

	2″	2½″	3″	3½″	4″
Galvanized round pipes with ears per 6′ 0″	2/7½	3/1½	3/9	4/3	4/9
Painted round pipes with ears per 6′ 0″	2/4½	2/9	3/1½	3/7½	4/–
Painted or galvanized short lengths with ears, extra each	–/6	–/6	–/6	–/6	–/6

18 Gauge Gutters.

	3″	3½″	4″	4½″	5″	6″
Galvanized half round gutters per 6′ 0″	2/–	2/3	2/4½	2/9	3/–	3/7½
Painted half round gutters per 6′ 0″	1/6	1/9	2/–	2/3	2/6	3/–
Painted or galvanized short lengths extra each	–/3	–/3	–/3	–/3	–/3	–/3

Asbestos-Cement Rainwater Goods

The following prices are subject to 12½ per cent. trade discount.

Orders over £30 are subject to 17½ per cent. trade discount.

Rainwater pipes.

Prices are for 6′ 0″ lengths, and 10′ 0″ lengths in 2″, 2½″ and 3″ diameters. Short lengths up to 2′ 0″ are charged as one yard. From 2′ 0″ to 4′ 0″ charged as 1½ yards. From 4′ 0″ to 6′ 0″ charged as 2 yards. Over 6′ 0″ charged as 10′ 0″.

Round pipes.	
2″	per yard run 1/10
2½″	per yard run 2/0¾
3″	per yard run 2/5¾
3½″	per yard run 2/11¼
4″	per yard run 3/4¾
4½″	per yard run 4/10¼
5″	per yard run 5/9½
6″	per yard run 7/1¾

Gutters.

Short lengths of gutter up to 2′ 0″ charged as 1 yard; from 2′ 0″ to 4′ 0″ as 1½ yards, and over 4′ 0″ as 2 yards.

	3″	4″	4½″	5″	6″	8″
Half round gutters per yard run	1/3¾	1/6¾	1/7¾	1/11	2/8	3/3½
Ogee gutters per yard run	—	1/11	2/0¾	2/5¾	3/0¼	3/11¼

INTERNAL PLUMBER

✱Lead pipe in coils, 5 cwts. and upwards	per cwt. 26/9
✱Lead soil pipe	per cwt. 30/6
Add if ribbon marked	per cwt. –/3
Lead ternary alloy, No. 2 quality extra over lead pipe	per cwt. 7/–
Plumber's solder	per cwt. 114/–
Tinman's solder	per cwt. 168/–

Drawn lead traps with brass screw eye, 6 lbs.

		1″	1¼″	1½″	2″
S. trap	each ✱1/8	2/–	2/6	3/7	
P. trap	each ✱1/6	1/8	2/–	2/10	
Extra for 3″ deep seal	each	–/6	–/6	–/6	–/6

✱ Items marked thus have fallen since October 5.

CURRENT PRICES

BY DAVIS AND BELFIELD

I N T E R N A L   P L U M B E R

INTERNAL PLUMBER—(*continued*)

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.

	½″	¾″	1″	1¼″	1½″	2″
Tubes.						
Tubes 2 ft. long and over per ft.	–/5½	–/6¾	–/9¼	1/1	1/4½	1/10
Pieces 12″ to 23½″ long each	1/1	1/5	1/11	2/8	3/4	4/9
Bends .. .. each	–/11	1/2	1/7½	2/7½	3/2	5/2
Fittings.						
Elbows, square .. each	1/1	1/3	1/6	2/2	2/7	4/3
Elbows, round .. each	1/2	1/5	1/8	2/4	2/10	4/8
Tees .. .. each	1/8	1/7	1/10	2/6	3/1	5/1
Crosses .. .. each	2/9	3/3	4/1	5/6	6/7	10/6
Sockets, plain .. each	–/4	–/5	–/6	–/8	–/10½	1/3
Sockets, diminished each	–/6	–/7	–/9	1/–	1/4	2/–
Flanges .. .. each	1/–	1/2	1/4	1/9	2/–	2/9
Caps .. .. each	–/5	–/6	–/8	1/–	1/3	2/–
Plugs .. .. each	–/4	–/5	–/6	–/8	–/10	1/8

Fittings and flanges and tubes ordered in long random lengths are subject to the following trade discounts :—

	Tubes	Fittings	Flanges
Gas	62½%	53¾%	57½%
Water	58¾%	50%	52½%
Steam	56¼%	46¼%	47½%
Galvanized gas	58¾%	46¼%	47½%
,, water.. ..	48¾%	42½%	42½%
,, steam ..	43¾%	38¾%	37½%

Brasswork. Best Quality

	½″	¾″	1″
Brass screw-down bibcocks, with crutch top, screwed for iron .. per dozen	36/–	56/–	99/–
Ditto, with screw ferrule .. per dozen	42/–	62/6	109/–
Chromium plated easy clean screw-down bibcocks, with capstan head lettered, screwed for iron .. per dozen	59/–	86/–	168/–
Ditto, with screw ferrule .. per dozen	67/–	97/–	182/–

	Brass Screwdown Stop Cocks with Unions both Ends	Brass Screwdown Stop Cocks with Screwed Ends	Brass Screwdown Stop Cocks with Male Screwed End and Iron Unions
½″ .. .. per dozen	48/6	36/–	45/–
¾″ .. .. per dozen	71/6	56/–	55/–
1″ .. .. per dozen	109/–	91/–	102/–

	½″	¾″	1″
Portsmouth pattern ball valve for low pressure, screwed for iron .. each	5/–	7/–	14/3
Ditto, with flynut and union .. each	5/9	8/–	16/–
High pressure ditto, screwed for iron each	5/–	7/–	14/3
Ditto, with flynut and union .. each	5/9	8/–	16/–

	2″	2½″	3″	4″
Socket thimble sloping shoulder per dozen	11/–	14/9	17/9	24/6

	1½″	2″	2½″	3″
Flanged ferrule thimble .. per dozen	8/9	11/–	—	15/6

	½″	¾″	1″	1¼″	1½″	2″
Union joints for lead and iron .. per dozen	19/–	23/–	35/–	47/–	61/–	82/–
Single nut short boiler screws .. per dozen	6/9	10/–	16/6	23/–	36/–	66/–
Double nut boiler screws per dozen	10/–	11/–	17/6	25/6	48/–	76/–

Belfast sink wastes stamped brass with brass plug diameter of outlet 2″ .. .. .. per dozen 20/–

Galvanized Mild Steel Open Top Cisterns riveted with internal angle iron at top and corner plates

The following prices are subject to 15% and 20% trade discount :—

	14-gauge			12-gauge			⅛″ plate			3/16″ plate		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
50 gallon capacity each	2	5	11	2	14	5	3	1	7	7	0	8
100 ,, each	3	8	9	4	2	11	4	16	9	9	10	8
200 ,, each	6	6	9	6	19	5	7	18	3	13	1	0
500 ,, each	12	6	0	13	16	1	15	16	3	22	6	9
1,000 ,, each	—			21	9	4	24	19	5	34	15	4

INTERNAL PLUMBER—(*continued*)

Galvanized Hot Water Tanks, fitted with handhole cover.

The following prices are subject to 15% and 20% trade discount :—

Capacity	16-gauge tested to a pressure of 1 lb. per sq. inch = 1½ ft. head of water			14-gauge tested to a pressure of 3 lbs. per sq. inch = 4½ ft. head of water			12-gauge tested to a pressure of 7½ lbs. per sq. inch = 10 ft. head of water			⅛″ plate tested to a pressure of 10 lbs. per sq. inch = 15 ft. head of water		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
20 gallons each	2	0	3	2	3	11	2	7	8	2	12	9
40 ,, each				3	1	7	3	9	0	3	16	8

Capacity	Tested to a pressure of 5 lbs. per sq. inch = 7½ ft. head of water			Tested to a pressure of 7½ lbs. per sq. inch = 10 ft. head of water		
	£	s.	d.	£	s.	d.
60 ,, each	4	19	3	5	5	5
80 ,, each				7	5	7
100 ,, each				8	4	5

Screwed flanges or bosses

½″	¾″	1″	1¼″	1½″	1¾″	2″	2¼″
1/8	2/–	2/4	2/11	3/4	3/9	4/8	6/9

Extra per flange or boss.

2½″	3″	3½″	4″	4½″	5″	6″
8/4	14/3	16/9	19/3	26/11	30/1	45/1

Galvanized Hot Water Cylinders, Mild Steel Riveted throughout, without Manhole, with usual number of flanges

The following prices are subject to 15% and 20% trade discount :—

Capacity	16-gauge tested to 5 lbs. pressure = 10 ft. head of water			14-gauge tested to 15 lbs. pressure = 30 ft. head of water			12-gauge tested to 20 lbs. pressure = 40 ft. head of water			⅛″ plate tested to 25 lbs. pressure = 50 ft. head of water		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
20 gallons each	1	18	7	2	2	8	2	8	4	2	15	4
40 ,, each	2	10	11	2	16	8	3	6	1	3	15	0
65 ,, each				4	8	7	5	1	8	5	16	1
75 ,, each				5	1	7	5	15	0	6	11	4
85 ,, each							6	10	8	7	11	9
100 ,, each										8	2	5

Cast Iron Soil Pipes and Connections, L.C.C. 3/16″ metal.

The following prices for soil pipes are subject to 20% trade discount, and the prices of the fittings are subject to 20% and 5% trade discount.

	2″	2½″	3″	3½″	4″	5″ ¼″ metal	6″ ¼″ metal
Minimum weights in lbs. per 6′ 0″ length	24	30	35	41	46	78	92
Pipes coated or uncoated per yard run	3/10¼	4/0¾	4/5¾	5/–	5/8¾	11/8	14/0¾
Double sockets extra each	–/11¼	–/11¼	–/11¼	–/11¼	–/11¼	1/0½	1/0½
Short lengths extra 2′, 3′ and 4′ per yard run	–/3¾	–/3¾	–/3¾	–/3¾	–/3¾	–/5	–/5
Single spigot branch cast on pipe .. .. each	4/3	4/5	4/7	4/9	4/11	7/6	9/8
Single socket branch cast on pipe .. .. each	10/9	11/–	11/3	11/6	11/9	16/–	19/–
Bends, standard angles each	3/1	3/5	3/9	4/8	5/3	9/4	12/9
Large radius bends each	4/–	4/4	5/–	6/–	7/–	18/–	16/9
Inspection bends raised flange door, 4 gunmetal bolts .. .. each	16/1	16/11	17/9	18/8	19/3	31/10	36/6
Swannecks 4½″ and 6″ projection .. .. each	3/9	4/4	5/11	6/10	7/11	14/11	20/1
9″ ditto .. .. each	5/–	5/7	6/10	7/11	9/4	17/1	22/10
12″ ditto .. .. each	5/11	6/10	7/11	9/8	10/7	19/1	27/1
Single branch with two sockets. T pieces. T pieces diminishing two sockets, inverted two sockets. (each)	3/9	4/8	5/7	6/6	7/6	15/10	21/8
Parallel branch pieces not exceeding 6″ centres. Y pieces. Anti-syphon branches with curved arm. (each)	4/10	5/11	6/10	7/11	8/11	—	–
Double branch pieces, three sockets .. .. each	5/11	7/–	7/11	9/–	10/3	20/3	27/3
Inspection branch pieces double oval access door, 2 gunmetal screws each	12/11	14/–	14/11	16/6	17/9	29/2	36/2
Long branch pieces each	5/–	6/–	7/3	8/6	9/9	19/–	25/–

CURRENT PRICES

BY DAVIS AND BELFIELD

COPPERSMITH AND ZINCWORKER, GLAZIER AND PAINTER

COPPERSMITH AND ZINC WORKER

Copper

• Hot rolled copper sheeting in 1 cwt. lots, all gauges to 24 wire gauge	per lb.	–/10¼
• Light gauge copper tube, solid drawn	per lb.	1/1½
• Copper tube, solid drawn screwing sizes	per lb.	1/1
• Copper wire, 10 and 12 gauge	per lb.	–/10¾
• Copper nails, 1″ and up	per lb.	–/11½

Fittings for Copper Tubes

Compression Type	½″	¾″	1″	1½″	1¾″	2″	2½″
• Straight coupling each	1/2½	1/6	2/2½	2/10	4/0½	6/–	14/10½
• Obtuse elbow each	2/–	2/4¼	3/5¾	4/4¾	7/6½	11/1¾	—
• Tees .. each	2/3¼	2/7½	4/3½	6/2½	9/9¾	13/11½	20/6
• Crosses .. each	3/2¼	3/7½	5/6½	6/9	11/7½	16/2½	28/0½
• Reducing coupling each	—	1/6	2/2½	2/10½	4/0½	6/–	14/10½
• Bends .. each	1/8½	2/0¾	3/1½	3/11¾	7/0¼	10/6¼	14/11½
• Brass stop cocks each	4/0½	6/0½	8/9¾	16/4	22/8	38/4	—

Extra for Polishing 25%; Chromium plating 50%; Nickel plating and polishing 50%.

Capillary Type							
Straight coupling each	–/8	–/11½	1/5½	1/11	2/7	3/9	6/4¾
45° elbow .. each	1/5½	1/11	2/7½	3/6¼	5/3¼	7/11	11/5½
Tees .. each	1/7½	1/10	3/–	4/5	6/3	9/3	14/1
Crosses .. each	2/0¼	2/3¼	3/9	5/3½	8/–	11/8	20/4
Reducing coupling each	—	–/7	–/9½	1/2	1/9	3/1	4/10
Bends .. each	1/9	2/1½	3/1	4/2	6/7½	9/3	13/2
Pillar tap connection .. each	1/1¼	1/7½					

Extra for Polishing 15%; Chromium plating 40%; Nickel plating 27½%

Zinc

	Quantities of less than 3 cwts.	Quantities of more than 3 cwts.	Quantities of more than 5 cwts.
Sheet zinc, 10 gauge and up .. per cwt.	34/–	*33/–	*32/6

	5 sheets and under	12 sheets
• 8 gauge zinc safe hole perforated sheets, size 8′ 0″ × 3′ 0″ .. per sheet	5/2	4/5½
• 7 gauge ditto .. .. per sheet	4/7	3/11½
• 6 gauge ditto .. .. per sheet	4/1½	3/7

GLAZIER

Sheet Glass cut to size (ordinary glazing quality)

		In squares not exceeding 2 ft.	4 ft.	5 ft.	Over 6 ft.
• 18 oz. clear sheet ..	per foot super	–/2⅛	–/2⅞	–/3⅛	–/3⅜
• 24 oz. ditto	per foot super	–/3	–/4	–/4⅛	–/4⅜
• 32 oz. ditto	per foot super	–/4⅛	–/6	–/7	–/8
Obscured sheet glass net extra	.. ..	–/1½	–/1½	–/1½	–/1½
¼″ figured rolled glass, white	per foot super	–/6½			
¼″ ditto, normal tints ..	per foot super	–/9½			
Hammered, double rolled, Cathedral white	per foot super	–/6			
Ditto, normal tints ..	per foot super	–/8½			

Thick Drawn Sheet Glass cut to size

		In squares not exceeding 1 ft.	2 ft.	3 ft.	4 ft.	6 ft.	8 ft.
21/0Z″ thick ..	per foot super	–/9	–/11	1/–	1/2	1/3	1/5½
¼″ thick ..	per foot super	–/11	1/–	1/3	1/5	1/7	1/9½

		In squares not exceeding 12 ft.	20 ft.	45 ft.	65 ft.	90 ft.	100 ft.
21/0Z″ thick	per foot super	1/5½	1/8	1/8	—	—	—
¼″ thick	per foot super	1/9½	2/3	2/3	2/6½	2/10½	2/10½

For selected glazing quality add 10 per cent. to the above prices.

British or Foreign Polished Plate Glass cut to size

Ordinary ¼″ Substance		Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
In Plates not exceeding				
1 ft. super ..	per foot super	1/1	1/4	1/7
2 ,, ..	per foot super	1/5	1/7	1/10
3 ,, .	per foot super	1/10	2/1	2/6
4 ,, ..	per foot super	2/6	2/9	3/2
6 ,, ..	per foot super	2/9	2/10	3/3
12 ,, ..	per foot super	2/11	3/2	3/8
45 ,, ..	per foot super	3/1	3/10	4/2
65 ,,	per foot super	3/4	4/3	4/11

• Items marked thus have risen since October 5

GLAZIER—(*continued*)

British or Foreign Polished Plate Glass cut to size—(contd.)

Ordinary ¼″ Substance		Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
In Plates not exceeding				
90 ft. super ..	per foot super	3/7	4/8	5/1
100 ,, ..	per foot super	3/9	4/10	5/4

Plates exceeding 100 ft. super or 160 in. long or 104 in. wide at higher prices.

The usual thickness of polished plate glass is about ¼″, but if required of special thickness for glazing purposes add to the above for :—

		Plates up to and including 4 ft. super	All plates over 4 ft. super
⅛″ to 5/32″ ..	per foot super	–/2	–/4
⅛″ to 5/32″ exact	per foot super	–/2	–/3
5/32″	per foot super	No extra	–/1½
¼″ bare ..	per foot super	,,	–/1½
¼″ exact ..	per foot super	–/2	–/2
5/32″ to ⅜″ ..	per foot super	No extra	–/4½
⅜″ exact ..	per foot super	–/2	–/6

Special quotations should be obtained for other qualities and thicker substances.

Silvering

	Ordinary Quality on Polished Plate, Thick Drawn Sheet, Patent Sheet and Plain Sheet	On Embossed or Decorative Work
12 ft. super or 90 in. long per ft. super	9d.	1/4
20 ft. ,, or 100 in. long per ft. super	10d.	1/4
45 ft. super } or 110 in. long per ft. super	1/–	1/5
50 ft. ,, }	1/0½	1/6
55 ft. ,, } or 120 in. long per ft. super	1/1	1/6½
60 ft. ,, }	1/1½	1/7
65 ft. ,, } or 130 in. long per ft. super	1/2	1/8
70 ft. ,, }	1/3	1/9½
75 ft. ,, } or 140 in. long per ft. super	1/4	1/11
80 ft. ,, }	1/5	2/0½
85 ft. ,, } or 150 in. long per ft. super	1/8	2/5
90 ft. ,, }	1/11	2/9½
95 ft. ,, } or 160 in. long per ft. super	2/2	3/2
100 ft. ,, }	2/5	3/8

For silvering on fluted sheet, figured rolled and cathedral, add 4d. a foot to the prices set out in the first column for polished plate, etc.

Silvering bent glass, double or more, according to bend.

For plates over 100 ft. super add 3d. per ft. super for every 5 ft. or part of same.

Plates over 160 in. long at special rates.

Stripping for re-silvering, add 8d. per ft. super.

Wired Glass Cut to Sizes

		In squares not exceeding 1 ft.	2 ft.	3 ft.	4 ft.
¼-in. Georgian rough cast	per ft. super	10d.			
¼-in. Georgian polished plate	per ft. super	2/6	2/8	2/10	3/2
		8 ft.	12 ft.	20 ft.	30 ft.
¼-in. Georgian polished plate	per ft. super	3/8	3/10	4/2	4/6

Supplied in sizes up to 110 in. long and up to 36 in. wide.

For cutting to allow for wires in adjacent pieces to be " lined up," add 4d. per foot super.

PAINTER

White ceiling distemper	per cwt.	11/6
Washable distemper	per cwt.	60/–
Petrifying liquid	per gallon	4/6
• Ready mixed white lead paint (best) 5-cwt. lots, in 14 lb. tins	per cwt.	72/–
White enamel	per gallon	25/–
• Aluminium paint	per gallon	24/–
• Stiff white lead, genuine English stack process, 1-ton lots, in 1-cwt. kegs ..	per cwt.	56/–
• Driers	per cwt.	40/–
Linseed oil raw (5-gallon drums)	per gallon	3/–
,, boiled ,, ,, ...	per gallon	3/8
French polish	per gallon	11/6
• Knotting	per gallon	18/–
• Oil stain	per gallon	13/6
Varnish, oak	per gallon	10/–
• ,, copal	per gallon	17/6
• ,, flat	per gallon	21/–
Turpentine, genuine American, 5-gallon lots	per gallon	3/3
Creosote, 1-gallon lots	per gallon	1/4
Putty	per cwt.	18/–
Size	per firkin	3/6
• Best English quality gold leaf, 23 carat ..	per book	2/9
• Extra thick, ditto	per book	4/–

* Items marked thus have fallen since October 5.

BUILDING INDUSTRY

Recommendation of the Joint Contracts Tribunal in regard to the contractual problems confronting the building industry as the result of the war.

At a meeting of the Joint Contracts Tribunal the representatives of the R.I.B.A. and the National Federation of Building Trades Employers, of 82 New Cavendish Street, W.1, discussed and reviewed the contractual problems confronting the building industry as the result of the war. In so far as such problems are due in whole or in part either to the inability to obtain adequate supplies or to the increase in the prices of materials or to the uncertainty created in the minds of the parties through the lack of any provisions in the contract in regard to war risks, the Tribunal, as authors of the R.I.B.A. 1931 Standard Form of Building Contract and of the revised edition of that form issued in 1939, considered it desirable that some authoritative recommendation should be issued for the purpose of giving such guidance as might prove of general assistance towards the equitable solution of these problems as they may affect any particular contract.

In considering the general principles upon which any recommendation of the Tribunal should be based, they have not thought it within their province to express any views upon the strictly legal aspects of such problems as may arise. They appreciate that these will depend upon the specific terms of each contract and that such legal questions as may be involved will result from the particular circumstances of each case. They have, however, approached the matter not only with the knowledge that in a number of instances building work has been held up because of uncertainty, but also upon the assumption that it would not be the desire of either party to insist upon the strict letter of his contractual rights to the detriment of the other, but rather to arrive at an equitable arrangement for the completion of the works or the termination of the contract as the parties may desire.

The Tribunal therefore recommend that where the prices of materials and goods to be used in the building works have been increased owing to the war or where wages have risen, the net cost actually and necessarily paid by the contractor due to such increases in the prices of materials and goods or rises in wages after the outbreak of war should be reimbursed by the building owner, but that no profit should be allowed to the contractor upon such extra cost. Any delay that may be caused by difficulty in obtaining material or labour or otherwise due to the emergency and unforeseen conditions that have arisen should be met in any case by an extension of time.

The question of loss or damage caused by hostile action to buildings in course of erection has also received the attention of the Tribunal. In so far as it would appear that any compensation for war damage to buildings which might be paid under any scheme which might be drawn up by the Government would be paid to the building owner as owner of the land upon which the buildings were being erected, the Tribunal considered it equitable that the building owner should assume liability for such damage in respect of the works upon his land which, of course, as attached to his land are in his ownership, but that the responsibility for any loss or damage to plant, equipment or tools, being in the ownership of the contractor, should remain with him. Further, the Tribunal desire to recommend that in the event of the contract works being destroyed or damaged by hostile action the employer would have the right thereupon to determine the contract upon the terms that the contractor be paid the proper value of all works executed and all materials delivered prior to the happening of such event, including the works or materials so damaged or destroyed. The compensation to the owner would be such as the scheme of the Government may prescribe.

The Tribunal put forward the above recommendations as providing a basis upon which an agreeable settlement of present war-time contractual difficulties in respect of pre-war contracts may be reached in a manner fair to both parties.

The Tribunal recognize the need for carrying on the normal business of the country so far as is compatible with the public interest and it is hoped that the application of the general principles set forth in this recommendation may have the effect of not only continuing works already contracted for, but also of encouraging the undertaking of such new building works as may be possible having regard to the conditions created by the present emergency.

The Tribunal also desire to record their view that the general principles enunciated above should be applicable not only to private contracts, but also to cases where a local authority or other public body is the building owner and instructions have accordingly been given that the terms of this recommendation be brought to the notice of those responsible for public building works.

Royal Institute of the Architects of Ireland

At the last meeting of the Council of the R.I.A.I., nominations for the offices of President and Hon. Treasurer were taken. Mr. W. H. Howard Cooke, F.R.I.A.I., A.R.I.B.A., was nominated as President for the ensuing term of office, and Mr. T. F. Inglis, M.R.I.A.I., was nominated Hon. Treasurer.